

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Published every Saturday by the
Simmons-Boardman Publishing
Corporation, 1309 Noble Street,
Philadelphia, Pa., with editorial
and executive offices: 30 Church
Street, New York, N. Y., and 105
West Adams Street, Chicago, Ill.

Vol. 106

June 10, 1939

No. 23

SAMUEL O. DUNN, *Chairman of Board*
HENRY LEE, *President*
LUCIUS B. SHERMAN, *Vice-Pres.*
ROY V. WRIGHT, *Vice-Pres. and Sec.*
FREDERICK H. THOMPSON, *Vice-Pres.*
ELMER T. HOWSON, *Vice-Pres.*
F. C. KOCH, *Vice-Pres.*
ROBERT E. THAYER, *Vice-Pres.*
H. A. MORRISON, *Vice-Pres.*
JOHN T. DEMOTT, *Treas.*

CLEVELAND
Terminal Tower

WASHINGTON
1081 National Press Building

SEATTLE
1038 Henry Building

SAN FRANCISCO
485 California Street

LOS ANGELES
530 West 6th Street

Editorial Staff

SAMUEL O. DUNN, *Editor*
ROY V. WRIGHT, *Managing Editor*
ELMER T. HOWSON, *Western Editor*
JAMES G. LYNE, *Assistant to Editor*

C. B. PECK
ALFRED G. OEHLER
F. W. KRAEGER
E. L. WOODWARD
J. H. DUNN
D. A. STEEL
R. A. DOSTER
H. C. WILCOX
NEAL D. HOWARD
CHARLES LAYNG
GEORGE E. BOYD
WALTER J. TAFT
M. H. DICK
E. J. PHILLIPS
JOHN H. KING
W. H. SCHMIDT
JOHN S. VREELAND

The Railway Age is a member of
the Associated Business Papers (A.
B. P.) and of the Audit Bureau of
Circulations (A. B. C.).

Subscriptions, including 52 regular
weekly issues, and special daily edi-
tions published from time to time
in New York, or in places other
than New York, payable in advance
and postage free. United States,
U. S. possessions and Canada: 1
year, \$6.00; 2 years, \$10.00; foreign
countries, not including daily edi-
tions: 1 year, \$8.00; 2 years, \$14.00.

Single copies, 25 cents each.

H. E. McCandless, *Circulation
Manager, 30 Church St., New York,
N. Y.*

In This Issue

Railway Buying for Five Months

351 Million Dollars Page 973

An analysis of equipment purchases of Class I roads for the first few months
of 1939, indicating a rise of 37 per cent compared with the same period in 1938.

Rock Island Goes Modern in Material Accounting . . . 976

An article telling how this road has applied modern machine methods to its
accounting and statistical work and is now extending the application to material
pricing and inventories.

A Peek at "Railroads on Parade" 985

High-spots of the Eastern railroads' pageant at the New York World's Fair,
depicting a tale of men and machines.

EDITORIALS

Britain's Business Men Support Enlightened Transport Program.....	969
Track Patrol—Is It Modern?.....	971

GENERAL ARTICLES

What Will the Traffic Bear?—17.....	972
Railway Buying for Five Months 351 Million Dollars.....	973
Barber Freight-Car Snubber.....	975
Rock Island Goes Modern in Material Accounting.....	976
Roller Side-Bearing Is Improved.....	984
A Peek at "Railroads on Parade".....	985
Fewer Buildings—More Money.....	989
Locomotive Driving Journals Are Oil-Lubricated.....	990
Railroads Big Factor in Royal Tour.....	992

NEWS 994

REVENUES AND EXPENSES OF RAILWAYS 1010

The Railway Age is indexed by the Industrial Arts Index and also by the
Engineering Index Service

Advantages of Simultaneous over Sequence Switch Point Positioning



"Union" UR Interlocking at Elizabethport, C. R. R. of N. J.



And on the B. & O. C. T., Western Avenue, Chicago

ALL switch movements in an interlocking route are positioned simultaneously with "UR" ("Union" Route) Interlocking. Thus, route changes can be made in less time than it is possible to make them when switches have to be operated in sequence.

This modern signal system provides the fastest means for controlling a large, busy interlocked track layout.

By simply pushing a button on the control panel at each end of the desired route, all switches are automatically lined up and the signals cleared.

There are many other advantages. Shall we tell you about them?

UNION SWITCH & SIGNAL COMPANY
SWISSVALE, PA.

NEW YORK

CHICAGO

ST. LOUIS

SAN FRANCISCO

RAILWAY AGE

Britain's Business Men Support Enlightened Transport Program

It is an arresting fact that Great Britain and the United States, both faced with railway crises, are dealing with them by methods which appear to be radically opposed. In the United States we are proceeding on the principle of retaining with no relaxation our regulatory straitjacket for the railways, while we strive to apply similar governmental restraints to as many as possible of their competitors. In Britain there now exists virtually unanimous opinion among all interested parties that the true solution of their transportation crisis lies in largely freeing the railways from regulation, and permitting all transport competitors to meet on grounds of equal freedom.

Britain Mature, U. S. An Infant, in Transport Policy

While the British and American approaches appear incompatible, we believe that, fundamentally, they are not so. The difference lies in the fact that Britain has progressed much further in dealing with transport competition than the United States. America is still in the first reader, while Britain is getting ready to graduate. This conclusion is supported by the fact that the principal step which some leaders in Congress are now attempting to take, as shown by the Wheeler-Truman bill (S. 2009), is not believed by anybody to be more than a first movement in the right direction. Senator Wheeler himself has said that his measure, if passed, "is not going to be the solution for all the railroad problems by any manner of means." By contrast, the sponsors of the British proposals acclaim them with the utmost confidence as follows: "The report which the Transport Advisory Council has submitted to the Minister of Transport marks the beginning of an important epoch in the history of our national transport. . . . The report should, if implemented by legislation, mark the close of the period of chaos and waste in the national transport system." The development of measures for dealing with this perplexing problem being at an earlier stage here, Americans cannot speak with such confidence of the outcome.

The difference between the situations of the railways in the United States and Great Britain is primarily one of degree. In neither country are they earning enough

to assure their continuance as self-supporting private enterprises. In both the principal cause of their plight is competition with them not only fostered by being partly paid for by the taxpayers, but also by the much greater degree and rigidity of the regulation of the railways than of their rivals. The British railways are not yet bankrupt. In 1938 they earned on the average almost 2½ per cent on their investment, while the railways of this country earned less than 1½ per cent. Their relatively favorable status, as compared with that of United States railways, is due to the following:

Wherein Britain Surpasses U. S.

(1) Great Britain has had no "New Deal," and, consequently, its production and traffic have recovered from the depression. Industrial production in that country in 1938 was 16 per cent *larger* than in 1929, while in this country it was 28 per cent *smaller*.

(2) Britain is not dredging every cow pasture creek at the taxpayers' expense (as we are doing), enabling big corporations to enjoy toll-free transportation (while they charge their customers regular railway rates, pocketing the difference).

(3) Commercial users of the highways in Britain pay on the average much more adequately for the use of these facilities than do American truck operators. (For instance, the gasoline tax alone in England figures out to 13 cents per U. S. gallon.)

(4) British railways are allowed much wider latitude than American railways in making commodity rates upon short notice, in making "agreed charges" and, in general, in making rates to meet competition.

(5) British railways are consolidated regionally into only four systems, so that competition between railways is no problem. They concentrate the bulk of the traffic in each region on the lines which can handle it at the lowest operating costs, giving them the economies of mass production with which to face their competition. Moreover, with only four companies to agree upon policies, the British railways usually present a strong united front in defending themselves.

(6) British railways are not handicapped, to anything like the extent prevalent in America, by "full

crew" laws and "make work" union rules. So they are not under pressure, as American railways are, constantly to pull off trains and abandon lines because such trains and lines cannot, with light traffic, support highly-paid employees in idleness.

Rate-Making Freedom for British Railways

The British railways are at a stage where they can be given a fair chance to earn a living merely by the removal of their competitive *regulatory* handicaps, because their rivals are subsidized little if at all compared with most of the rivals of United States railways. Still, 2½ per cent is insufficient to keep a private property in prosperity and abreast of the needs of the shipping and traveling public. And so Britain's Transport Advisory Council (composed of representatives of *all* agencies of transportation, all users of transportation and organized labor) has recommended with practical unanimity:

(1) That regulatory classification of freight and maintenance of "standard" rates by the railways be ended. The railways are to be permitted to charge such rates as they see fit (either under the classifications or on commodity tariffs or under "agreed charges"), subject only to the provision that shippers or competitors may attack "unreasonable" rates before the Railway Rates Tribunal, which may require correction of "unreasonableness" when proved.

(2) That rates may not be attacked on the ground of "undue preference." This is just another way of saying that if railway rates are reduced at one point to meet a competitive condition, it will not be necessary to reduce rates at other points where competition does not exist. *The hold-him-while-we-hit-him spirit of our long-and-short-haul clause would be an intolerable violation of the British sense of fair play.*

(3) That consulting committees be set up with shippers (apparently similar to our shippers' advisory boards) and that all general rate questions be discussed in conference before any changes are made.

(4) That competitive differences between the railways and their highway rivals be left to voluntary conference between them, it being expected that they will be able to make enforceable agreements with each other as to rates and other conditions which enter into their competition.

A Test for Rate "Reasonableness"

When a question of the "reasonableness" of railway rates is raised with the Railway Rates Tribunal, that body is to consider, among other things, the following:

- (a) Whether or not the rate is detrimental to the public interest;
- (b) Variations in the value of currency;
- (c) The cost of providing the service which the rate covers;
- (d) The existence of alternative methods of transport for the service in question, and the charges made by such alternative methods;

(e) The effect of the charge on the financial position of the parties concerned, either generally or individually;

(f) The charge made to other shippers for the transportation of similar freight if it affects the shipper involved.

These British proposals have not yet been enacted into law—but they represent virtually the unanimous recommendation of the Transport Advisory Council, an official body on which all interests involved in transportation are represented. In view of the seriousness of the railway situation and the unanimity of the Council, it seems altogether likely that Parliament will give them legislative effect without much delay.

What can Americans, who are concerned with a transportation problem much more acute and complex, conclude from these proposals?

Transport Inequality Much Greater in U. S.

First, as enlightened as they are, their adoption in the United States would not alone remedy our transport competitive situation—because we have a problem largely created by the heavy subsidization of waterway and highway transportation, which is not so serious a matter in Great Britain. Our railways could be granted the same equality of *regulation* that is contemplated under this British plan, and still be heavily disadvantaged in meeting the competition of toll-free waterways and of trucks with microscopic license fees and gasoline taxes only one-third as great as Britain's.

Secondly, desirable as it might be to equalize regulation of transportation in the United States by freeing our railways from it rather than by regulating their rivals, the railways of this country know from their long and bitter experience with the Pettengill bill that dominant business opinion is not yet ready to accord them any real freedom to make their own rates. Furthermore, since we count our railroads by the hundreds and our motor and water carriers by the tens of thousands, it obviously would be much more difficult to get agreement among them without some regulatory coercion than in a compact country like Britain where companies are few and where almost everybody of any importance knows and frequently sees everybody else.

The Boorishness of Dominant Business Opinion in U. S.

Finally, however, the feeling toward these British proposals of an American interested in the continued efficient service of the railroads to his nation must be one of unalloyed admiration, and even envy. The British railways instituted their campaign for a "square deal" in regulation barely six months ago; and yet within this short time shippers and their competitors, in the conferences which have been going on ever since, have conceded one by one the fairness of the railways' contentions. The result is a program which will advance the economic interests of the nation as a whole.

What a sorry contrast our American experience provides! It affords a striking illustration of why Great

Britain has recovered from the depression while this country is still wallowing in the depths of it and is daily being confronted with more socialistic proposals based on the contention that "private enterprise has failed." Here the railways have campaigned for years for the modest concession to less unequal regulation embodied in modification of the long-and-short-haul clause, but without success. The Chamber of Commerce of the United States, after hearing from the railroads a detailed presentation of far more grievous discriminations than those from which the British railways suffer, made absolutely no move to recognize, even in *principle*, the injustice of these discriminations, much less to advocate their abolition as a necessary means of safeguarding the railroad industry as an important part of private enterprise.

Britain Heeds Economists—We Prefer Propaganda

In Britain when the question of inadequate payments by trucks for the use of the highways came up a decade ago the government appointed a commission of disinterested and competent economists to report upon it. Their report was received, license fees were increased and the question was settled. Here, by contrast, we have spokesmen for highway and trucking interests going up and down the land making an utterly dishonest comparison of their alleged "taxes" with the real taxes paid by the railroads in defense of their meager road-use fees; and the fanatics of water transportation, and Big Business interests unfairly benefiting by it, opposing not only tolls on waterways but any regulation whatever of water transportation or reduction of the regulation of competing railways.

We are not surprised that British public opinion is now ready to permit a regime of freedom in transportation competition. The dominant statesmanship, business leadership and public opinion of Great Britain have shown that they really believe in private enterprise, and consequently favor, and still favor as regards transportation as well as other industries, the time-tried economic policies that some years ago had pulled their country out of the depression. In this country the business leadership dominant in the Chamber of Commerce of the United States shows that it favors socialistic policies as much as any New Dealer if they happen to be policies by which certain Big Business interests believe they can make a racketeering profit.

Business leaders who can subordinate their particularistic interests to the national economic welfare, as British business men have done in helping the railways formulate this program, have evidenced the existence of a widespread civic maturity and responsibility that no longer requires a governmental club to make it behave. Whether American business leadership, and in particular that which insists upon enjoying undisturbed its privilege of subsidized transportation on the waterways and highways, can safely be spared the government's parental rod is a question we leave with our

readers. They already know what we think—viz., that this kind of business leadership plays directly into the hands of socialists, communists and other radicals, and is no less dangerous than they are to the system of private enterprise—of which it purports to be the virtuous and militant defender.

Track Patrol— Is It Modern?

From the beginning of the railways it has been the almost universal custom to require a daily inspection of track, either by the section foreman or by an experienced trackman whom he assigned to this duty, commonly known as a trackwalker. For many years this inspection was carried out on Sundays as well as on week days; on some roads two inspections were required daily; a few also maintained a system of night patrol. Doubtless this intensive watch of the track was necessary during the early days of railroading, because of the poorly designed track, the light materials of which it was constructed and other difficult conditions that confronted the maintenance forces of that day. In other words, the hazards upon which the system was founded were real and ever present.

As time went on, better materials were developed, rail grew in weight and stiffness, joint fastenings were improved in design and became more effective, tie plates and anti-creepers came into use, ties were given preservative treatment, surface and subsurface drainage was installed, the roadbed was widened and better ballast was applied. In short, the track was made stronger, more stable and more nearly adequate to support the loads imposed upon it, until today the number of individual defects that are being discovered have decreased to the point where, in many cases, track inspection has become more or less perfunctory.

Habits once formed are not easily broken, and established customs tend to persist long after the causes from

How the Taxpayers Provide "Cheap" Waterway Transportation for Big Business

"The money we make on our water terminals we put in our pocket. We do not pass it on to the consumer. No other oil company does that I know of, except where there is price competition, and naturally in that connection we have a depreciation set up that may last for 10 years; but in the meantime we have fully amortized our investment shown in our accounting procedure, and the economy that we realize is credited to the P. and L. account for margin.

"We have such great savings in our water terminals that we eliminate entirely insurance and evaporation in all of our calculations. . . ."

Testimony of the traffic manager of a large oil company cited by Senator Wheeler in the debate on S.2009.

which they arose have ceased to exist. Can it be that the existing system of track inspection is being continued more from habit than because it can be justified as a safety measure for present-day track?

Again, if it is no longer necessary to patrol the track at night or on Sundays, is daily patrol during the remainder of the week necessary? A rail is as likely to break after the trackwalker passes over it as before he reaches it. Switch points do not stand open, except as the result of an accident, unless the conditions that cause them to do so have existed for days or weeks; spreading track and tipping rail give evidence of their presence for an equal or longer time. In other words, many of the defects that once caused grave concern have been eliminated through better design and stronger track, while those most common in the present day develop slowly enough to permit correction before they demand emergency action.

This is not a plea for the abolition of track inspection, for as long as trains are run over track of the present design it should be inspected with a reasonable

degree of regularity. It is intended rather to raise the question whether the *present system* of inspection, which is admittedly a carry-over from a former period, is outmoded by conditions which are in no wise similar to those in which it had its origin.

Reluctance to discontinue or alter a practice of long standing sometimes acts as a bar to improvements in methods of doing work, even though the practice is known to be outmoded, especially where a question of possible hazard is involved. If the present method of track inspection is unduly diverting the already greatly reduced time of track men from the pressing duties of track maintenance, railway maintenance officers and their managements can well afford to investigate the results secured from their present expenditures for track patrol to determine the extent, if any, to which they are warranted in reducing these outlays while at the same time meeting the requirements of safety and economy. Over-conservatism may explain but it cannot excuse failure to alter practices so that they will conform with current requirements.

What Will the Traffic Bear?—17

Recent figures show that truck traffic is growing alarmingly at the expense of rail traffic. Figures on truck traffic for March and April, 1939, were up 21 per cent compared with the same months last year. They were also 16.6 per cent higher than in the same months in 1936 when industrial production was much greater than it now

some of the railroads are proposing will take their "pick and choose" advantage away from them.

Any group of motor carriers or forwarders who would do anything voluntarily to ruin their present "pick and choose" advantage over the railroads would be just plain dumb. It follows, therefore, that the truckers with their proposals to the railroads to induce them to lay off of proposed rate changes are trotting out a Trojan Horse. With one hand they wave the olive branch, but the hand behind their backs still clutches the chisel—the instrument used to whittle the profitable business away from the railroads.

Only recently the Mid-Atlantic States Motor Carrier Conference petitioned the I. C. C. to require the Central of New Jersey and other railroads (Docket 27837) to cease and desist from the practice of making rates netting only a slight return above out-of-pocket costs for the purpose of attracting traffic back to the railroads. The Commission obligingly held that the railroads ought not to engage in this practice.

How can the I. C. C. consistently rule that the railroads may not handle traffic in competition with the trucks at rates based upon out-of-pocket cost and not apply the same rule to the trucks? Why don't the railroads protest the many thousands of truck rates which produce only a slight margin over out-of-pocket trucking costs?

The railroads have everything to gain by taking advantage of their ability to produce low cost mass transportation. They can produce such transportation by organized and co-ordinated effort at lower costs than the freight forwarders and the trucks can offer—especially for distances beyond 200 miles.

Did some of these birds who are trying to induce the railroads to agree not to reduce their rates ever hear of the Sherman Act?

The Teacher's Pet Decision - Docket 27837



is. Merchandise traffic by truck in March and April was up 20 per cent over last year, but railroad merchandise traffic was up only 2 per cent over last year.

Well—some of the truckers are making overtures to the railroads to try to get them to lay off of changing rail rates to a basis more nearly reflecting the railroads' lower costs. It isn't philanthropy which is moving the truckers to make these overtures, but the fear that the rate changes

Railway Buying for Five Months 351 Million Dollars

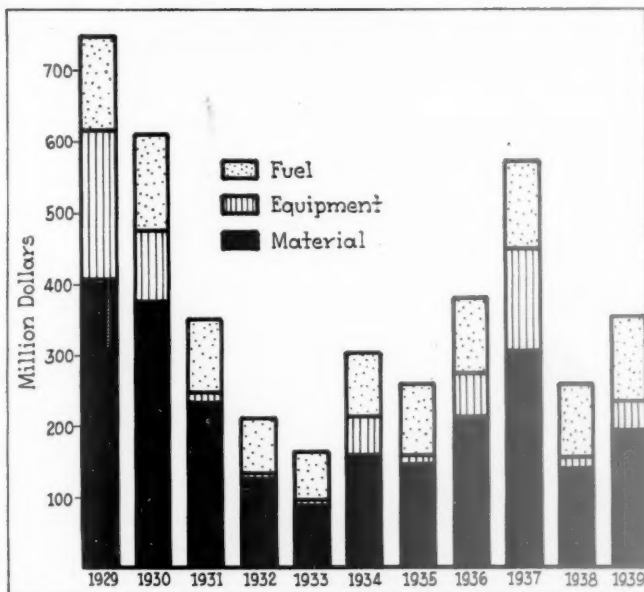
Purchases of equipment, materials and fuel 37 per cent over 1938 — Revival since coal strike — Inventories slightly larger

BASED on fairly complete records of purchases for the first four months and the best information available for May, the Class I railroads purchased approximately \$351,055,000 of equipment, materials and fuel during the first five months of 1939, which was an increase of approximately \$95,750,000 or 37 per cent over the corresponding purchases in 1938. While this five months' total was 39 per cent less than the corresponding total in 1937, it was the largest five months' total since 1930, except for 1937 and 1936.

\$232,520,000 from Manufacturers

Materials, exclusive of fuel and equipment, purchased from manufacturers during the five months totaled \$192,584,000 which was an increase of \$49,111,000, or 34 per cent, and new locomotives and cars ordered from manufacturers totaled \$39,936,000, an increase of \$27,156,000 from the corresponding total in the first five months of 1938. The combined purchases from manufacturers, totaling \$232,520,000, were an increase of \$76,267,000, or 30 per cent, over the corresponding figures for 1938, although they were less by \$219,395,000 or 49 per cent than the corresponding totals in 1937. During the same period the railroads spent \$118,535,000 for fuel, as compared with approximately \$99,052,000 in the same period of 1938.

Expenditures for crossties in the first five months of this year totaled \$17,674,000, as compared with \$18,445,000 in the first five months of 1938. Expenditures for rail, including some rail ordered in 1938, totaled \$13,816,000 as compared with \$12,628,000 in the first five months of 1938, and expenditures for miscellaneous materials, including repair parts for locomotives and cars and some materials for building equipment in railway

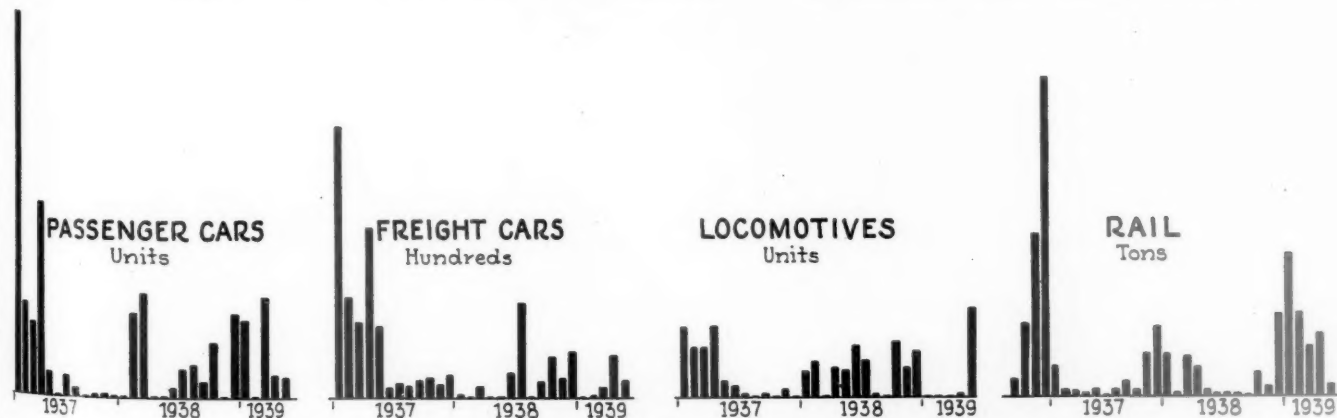


Railway Buying—First Five Months

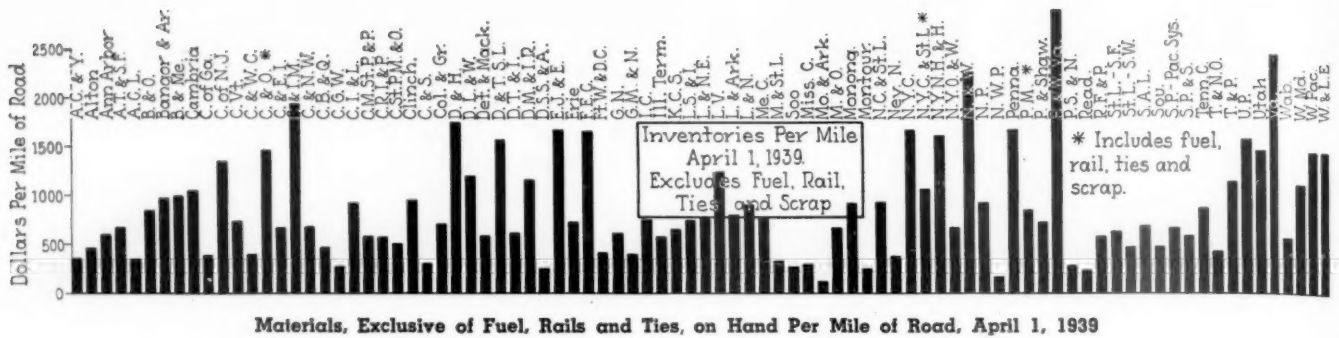
shops, totaled \$161,094,000 in the first five months of this year as compared with \$112,400,000 in the corresponding period of 1938.

Month to Month Purchases

During May approximately \$9,167,000 of new locomotives and cars were ordered from builders, as compared with \$10,089,000 in April, \$15,594,000 in March, \$320,000 in February, and \$4,766,000 in January. The corresponding total in May, 1938, was \$1,088,000. Other figures for May are not as conclusive at this time; however, they indicate that expenditures for materials, exclusive of fuel, from manufacturers totaled \$39,000,000, as compared with about \$41,000,000 each in March and April and with \$38,733,000 in January. The combined indicated purchases of materials and equipment, exclusive of fuel, from manufacturers during the month of May were approximately \$48,167,000, as compared with



Month to Month Comparisons of Orders for Rails and Equipment, January 1937 to June 1939



\$51,416,000 in April, \$56,854,000 in March, and \$43,499,000 in January. It will probably be some time before the full effect of

however, were small compared with the increases. Purchases increased 21 per cent on the Alton & Southern, 46 per cent on the Central of Georgia, 42 per cent on the Central Vermont, 43 per cent on the Chicago & Eastern Illinois, 50 per cent on the Detroit Toledo Shore Line, 81

Railway Purchases—Materials and Equipment—Five Months

	Materials received from mfrs. (000)	Equipment ordered from mfrs. (000)	Total from mfrs. (000)	Fuel (000)	Total including fuel (000)
1929.....	\$406,309	\$207,474	\$613,783	\$146,791	\$760,574
1930.....	375,089	99,287	474,376	138,511	612,887
1931.....	231,778	11,136	242,914	107,222	350,136
1932.....	127,000	1,910	128,910	82,700	211,610
1933.....	92,132	2,119	94,251	71,425	165,676
1934.....	167,535	48,616	216,151	88,461	304,612
1935.....	149,050	7,596	156,646	103,750	260,396
1936.....	212,460	62,301	274,761	108,592	383,353
1937.....	304,811	147,024	451,835	123,125	574,960
1938.....	143,473	12,780	156,253	99,052	255,305
1939.....	192,584	39,936	232,520	118,535	351,055
Revised to June 2, 1939.					

Railway Purchases—Materials and Supplies

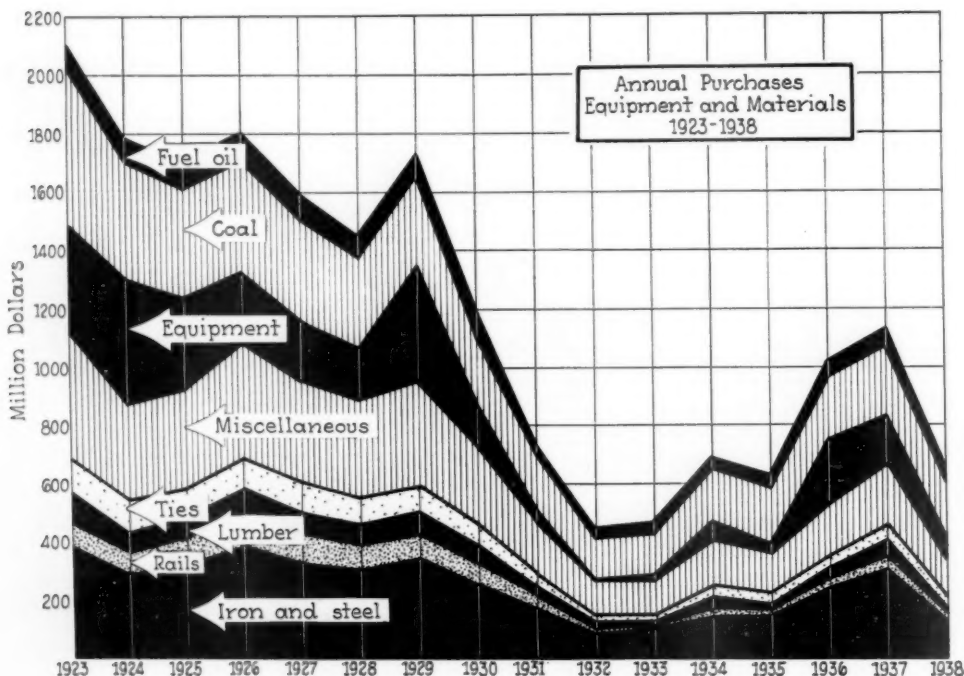
	Fuel (000)	Rail (000)	Cross ties (000)	Other Material (000)	Total (000)	Total Less Fuel (000)
1938						
January.....	\$22,198	\$1,830	\$3,867	\$26,225	\$54,120	\$31,922
February.....	20,298	2,369	3,698	21,521	47,886	27,588
March.....	20,334	2,886	3,891	23,563	50,674	30,340
April.....	18,770	2,749	3,464	21,227	46,210	27,440
May.....	17,452	2,794	3,525	19,864	43,635	26,183
5 Mos.....	99,052	12,628	18,445	112,400	242,525	143,473
1939						
January.....	22,837	447	2,608	35,678	61,570	38,733
February.....	22,714	2,638	2,830	26,796	54,978	32,264
March.....	24,173	4,244	3,928	33,088	65,433	41,260
April.....	24,352	3,487	4,308	33,532	65,679	41,327
May.....	22,000	3,000	4,000	32,000	61,000	39,000
5 Mos.....	116,076	13,816	17,674	161,094	308,660	192,584
Revised to June 2, 1939.						

the coal strike is reflected in the records of railway expenditures, but the figures show that the 30 million ton decline in coal production since April 1 was not large enough to do more than check the rising tide of railway buying which has prevailed since the first of the year. The indicated total for May this year was an increase of \$25,444,000 or 36 per cent over May, 1938, and at this time a revival of purchasing is again in process.

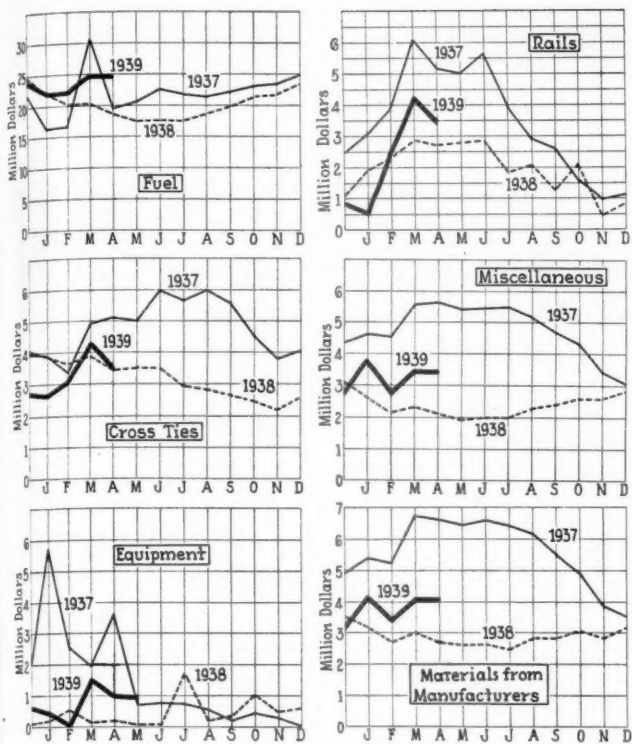
Materials and supplies, exclusive of fuel, rail and ties, purchased by 30 Class I railroads in the first four months of 1939 were smaller on 14 roads than in the first four months of 1938 and larger on 15 roads. The declines,

per cent on the Duluth, Missabe & Iron Range, 52 per cent on the Erie, 16 per cent on the Florida East Coast, 41 per cent on the Lehigh Valley, 40 per cent on the New York, Ontario & Western, 80 per cent on the Southern Pacific, 60 per cent on the Spokane, Portland & Seattle, and 13 per cent on the Wheeling & Lake Erie.

Based on reports available at this time, Class I railway inventories in the aggregate totaled \$328,670,000 on May 1. This was \$5,312,000 more than on January 1, but



Selected Divisions of Railway Purchases by Years 1923 to 1939



Month to Month Trends of Purchases

the total was \$45,432,000 under the total on May 1, 1938, and about \$2,273,000 less than the total on April 1, 1939. Inventories include standby and reclaimed materials as well as new materials. The total on May 1 included approximately \$29,327,000 of fuel, which was approximately \$6,667,000 more than the fuel on hand January 1 and about \$4,104,000 more than the fuel inventory a year ago. Rail stocks, including second hand rail, totaled approximately \$27,529,000 on May 1, or about the same as on April 1 but approximately \$6,547,000 less than on May 1 last year. Aggregate crosstie inventories, amounting to \$64,899,000 on May 1, according to present figures, were about \$5,408,000 more in the aggregate than on January 1, 1939, and about \$6,684,000 under the cor-

Materials in Stock—Class 1 Railroads

	Fuel (000)	Rail New and S.H. (000)	Crossties (000)	Stores Stock (000)	Scrap (000)	Total (000)
1938						
Jan. 1.....	\$30,499	\$30,333	\$59,015	\$252,104	\$13,106	\$385,057
Feb. 1.....	31,453	31,820	66,153	242,328	11,634	383,388
Mar. 1.....	28,822	32,238	68,558	240,790	11,642	382,050
Apr. 1.....	27,847	34,644	73,280	233,396	11,214	380,381
May 1.....	25,223	34,076	71,583	232,747	10,464	374,093
June 1.....	22,391	33,504	65,020	230,902	12,127	363,944
July 1.....	22,568	33,007	63,271	226,370	10,042	355,258
Aug. 1.....	20,665	32,238	60,900	219,735	11,855	345,393
Sept. 1.....	23,192	30,451	62,935	210,564	10,369	337,511
Oct. 1.....	23,376	28,934	58,968	207,791	10,818	329,887
Nov. 1.....	20,802	27,280	55,619	207,814	11,282	322,797
Dec. 1.....	24,311	27,544	60,750	194,137	11,882	318,624
1939						
Jan. 1.....	22,660	24,733	59,491	199,477	11,200	317,561
Feb. 1.....	25,594	24,691	61,796	196,330	10,393	318,804
Mar. 1.....	27,100	26,229	63,346	196,669	10,239	323,583
Apr. 1.....	29,531	27,720	65,350	197,265	11,077	330,943
May 1*.....	29,327	27,529	64,899	192,463	14,451	328,669

*Subject to revision with more complete reports.

responding inventory on May 1, 1938. Storehouse stocks totaling \$192,463,000 on May 1 were about \$7,014,000 lower than on January 1, 1939, and about \$40,284,000 less than on May 1, 1938. Only two of the railroads reporting May 1 inventories thus far had larger inventories of storehouse materials on that date than on May 1 last year.

The slight aggregate rise in the inventories of ma-

terials, exclusive of fuel, from manufacturers since January of this year reflects a slightly reduced rate in the aggregate consumption of material by the railroads. This is contrasted with the period from January, 1938, to December, 1938, during which the railroads were buying less material than they consumed and shows that the railroads in the aggregate have about completed the liquidation of surplus materials which piled up in 1937 and are now relying on purchases to replenish stocks and furnish the requirements for current maintenance and improvement work.

Barber Freight-Car Snubber

THE new Barber snubber illustrated has recently been developed by the Standard Car Truck Company, Chicago, especially for inclusion in the spring group of freight cars to promote easy riding; reduce lading damage claims occasioned by the vertical harmonic action of the springs, and reduce the general maintenance expense of cars. The unique features of this snubber are that it displaces two springs of the group instead of one as is customary with the barrel-type snubber, and has large frictional area, producing low pressure per square inch of contact.

It is preferably applied lengthwise of the car, and when substituted for the two outside springs it is exposed for easy inspection. The illustration shows the snubber applied in the spring group in combination with a flanged type of spring plate.

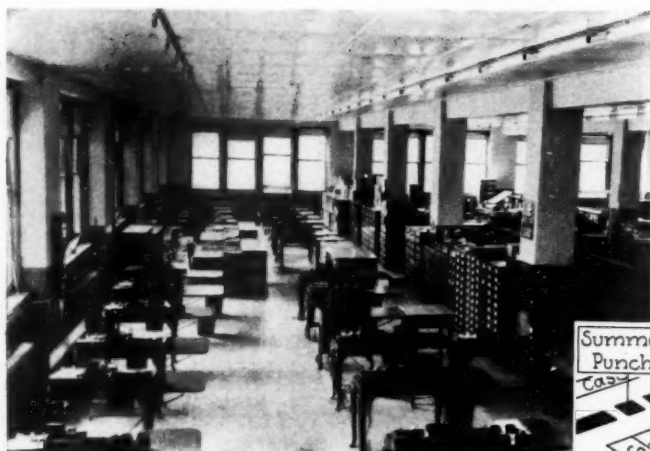
The upper and lower housings of this snubber are interchangeable as are also the friction castings. The housings are made of heat-treated alloy cast steel, and so designed as to fit into any standard type of plain or flanged spring plate for use with the conventional type of side frame for freight-car trucks. The friction castings are of special alloy friction iron which operate against a double-coil spring.

This snubber is simple in design, free of small pieces that usually show rapid wear, and is said to produce an exceptionally easy ride under all conditions of load. Because of the large area of frictional contact, the pressure per square inch exerted against the friction members is unusually low, thereby tending to assure long and satisfactory life.

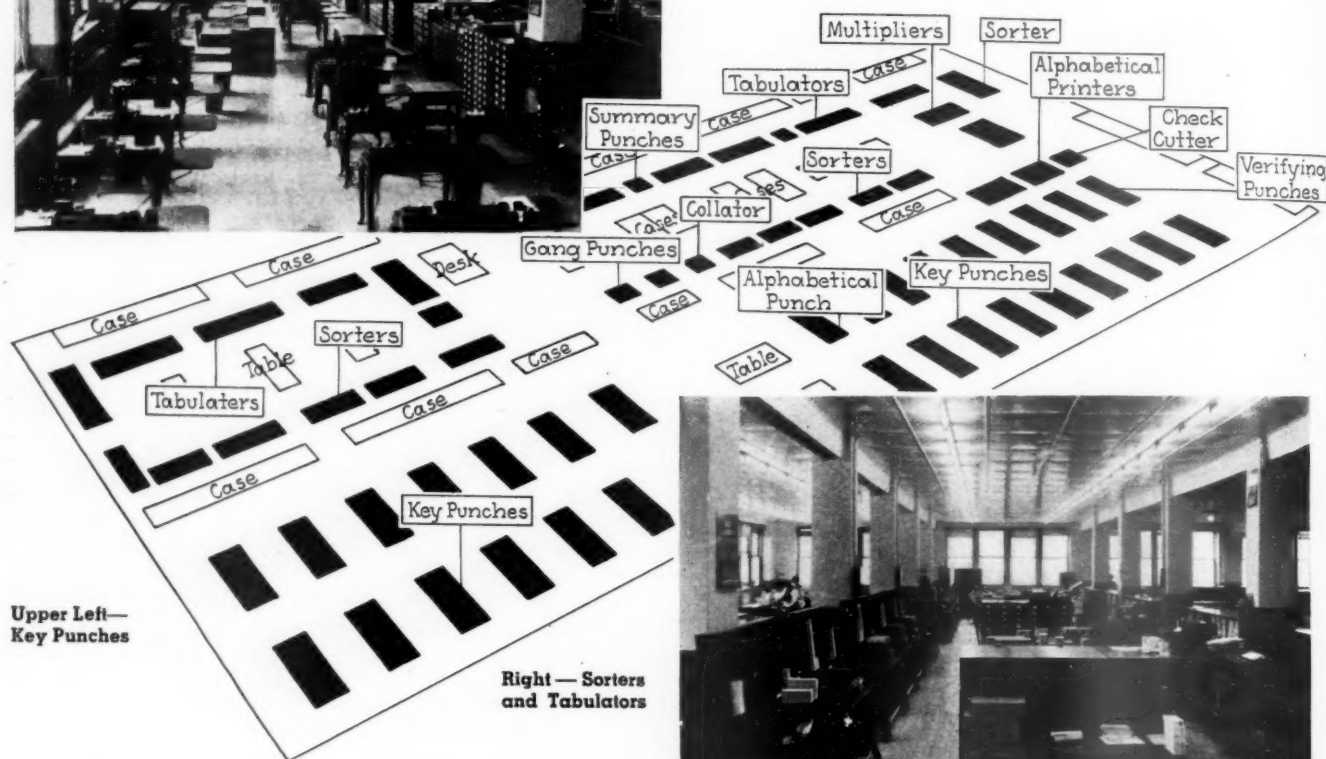


Barber Freight-Car-Truck Snubber, Notable for Simple, Rugged Construction and Large Friction Surfaces

Rock Island Goes Modern



Extends machine methods to pricing and inventories in largest mechanized railway bookkeeping operation — Fluorescent Lighting



Upper Left—
Key Punches

Right—Sorters
and Tabulators

Center—Machine Layout—
Fluorescent Lights in Ceiling



STEP by step with increasing strides in the last two years the Chicago, Rock Island & Pacific has been applying modern machine methods to its accounting and statistical work and in January it extended the application to material pricing, with the result that the railroad now has in operation the most extensively developed installation of accounting machines in railway service.

Sixty-six Machines

This equipment, which is concentrated at Chicago, includes 66 high speed automatic bookkeeping machines, all installed in a 40 ft. by 90 ft. room which has just been improved for the purpose by sound proofing and fluorescent lighting. The fluorescent lights, consisting of a series of fluorescent tubes attached to the ceiling, are believed to be the first installation made in a railway office building. The bookkeeping machines all employ the punch card principal in their operation as developed by the International Business Machines Corporation.

Twenty-six machines are automatic duplicating key punches which take numbers from documents as fast as

operators can strike the keys and automatically punch them into blank cards that are fed through the machines. Two other machines are also card punches but are built to perform gang work by reproducing or duplicating, automatically, information from one or a series of punched cards into other cards.

Four other machines also look like the key punches but instead of punching cards they are used to check the accuracy of cards already punched where this is necessary as in preparing payroll data or vouchers. Punched cards, instead of blank cards, are fed into the machines and the operators go through the same operation as when punching cards originally. If the figures originally punched are correct the cards proceed through the machine; if not the cards stop. One machine is an alphabetical punch which punches cards with letters (in code) as well as numbers and at the same time interprets the information punched by printing the letters and numbers at the top of the cards.

In 12 machines, prepunched cards are automatically sorted into any desired combination at the rate of 400 cards per minute for each sorting. One machine, known

Material Accounting

Three Tabulators in a Row. These Machines Automatically Add and Tabulate Numbers at the rate of about 120 Cards per minute



as the-collator, merges cards for the multiplier or reproducer at the rate of 400 cards per minute by picking out those cards in one stack which correspond with cards in another stack and placing them together, as where numbers in one series of cards are to be multiplied by numbers on other cards.

Two machines receive prepunched cards and automatically multiply the amounts in designated columns by the amounts in other cards, or other columns of the same card, and punch the results in the cards at the rate of 20 to 25 cards per minute. In 10 machines the amounts on prepunched cards are added up and the amounts and totals tabulated at the same time at the rate of 120 cards per minute.

Four other machines, when connected to the tabulating machines, automatically punch the calculating machine totals into other cards at the rate of 120 cards per minute, thus preserving intermediate totals for use when computing monthly or other totals and avoiding the necessity of rehandling all cards. Two other machines automatically take prepunched cards and print names and numbers onto statements at the rate of 80 cards per minute. One of these machines is equipped with a carriage which automatically shifts the paper vertically to separate one statement from another, as when pay rolls or checks are prepared.

Over a Million Records Per Month

Machine methods were first introduced on the Rock Island in 1906 when the railroad installed equipment of

Work Received for Machine Accounting—One Month	
	Units Handled
Trainmen, enginemen and switchmen's time slips.....	90,000
Station, roadway, shop, general office, etc., time reports.....	85,000
Shop labor distribution.....	80,000
Repairs to individual locomotives.....	150,000
Fuel receipts and issues.....	10,000
Roadway material reports.....	50,000
Shop material reports.....	180,000
Vouchers.....	25,000
Bills.....	8,000
B&E, water service, signal labor distribution.....	10,000
Section and extra gang labor distribution.....	10,000
Ice reports.....	500

Ballast reports	500
Grain door reports.....	300
Work train reports.....	1,500
Agent sundry draft payments.....	8,000
Agents remittance tickets.....	22,000
Centralized station debits and credits.....	60,000
Local waybills	100,000
Interline waybills	90,000
Interline received abstracts.....	70,000
Interline forwarded abstracts.....	60,000
Overhead abstracts	35,000
Advances and prepaid forwarded.....	35,000
Foreign line statement of differences.....	5,000
Rock Island statement of differences.....	5,000
Correction accounts	10,000
Interchange reports	15,000
Company material	3,000
Division percents	3,000
Agents reports of advances and prepayments.....	2,000
Ton miles summary	10,000
Freight conductors' wheel reports.....	12,000
Passenger conductors' wheel reports—suburban.....	15,000
Inventory of grain doors.....	60,000
Casualties—claims	1,000
Loss and damage claims.....	1,000
Overcharge claims	1,000
Relief claims	20,000
Railroad retirement and social security.....	10,000
Total	1,365,800

this type to compile freight commodity statistics. In 1919 other equipment was installed in the office of the Auditor of Car Service accounts to compile operating statistics and more equipment was installed in 1928 to include per diem accounting. In 1929 operations in the auditor of freight accounts office were improved and extended to include freight accounting as well as statistics. In 1935, station accounting was centralized and the equipment was further utilized. Then in 1936, with the consolidation of sub-district accounting offices into one disbursement office at Chicago, machine methods were extended to timekeeping and disbursement work followed more recently by additional developments, in-

cluding material pricing, so that at present more than 40 different classes of work, involving 1,365,000 accounting papers per month from all parts of the railroad, are handled in this manner. These papers include 90,000 transportation employees' time slips, 150,000 records of repairs to locomotives, 80,000 shop labor distribution records, 10,000 fuel tickets, 50,000 roadway material reports, 180,000 shop material reports, 60,000 station reports, 190,000 waybills, 60,000 per diem receipts, 22,000 agents' remittance tickets and 20,000 relief claims. Other details are given in the table.

Before describing the methods of pricing material (the latest development in applying machine methods to accounting and statistical work) it will facilitate the study of the road's objectives and progress in mechanized book-keeping to outline some of the operations which preceded and to some extent paved the way for material pricing. The machine bureau maintains a card for each employee



The Alphabetical Punch
Writes and Punches

Twelve Key Punches
at Close Range



on the railroad, showing 22 items of information, including the name of each employee, his social security number, occupation, and location.

Time Rolls and Pay Checks

Cards punched from time reports of enginemen and trainmen contain 28 items of coded information,—the year, month, day, operating division, time report number, train number, engine number, miles run, miles guaranteed, class of service, nature of service, run number, miles of straight time worked, straight time paid for, miles of overtime, constructive miles, total locomotive miles paid, rate code, number of trips, personal identification number, total miles run, helper miles, light miles

and train terminal and switching miles. Time rolls are prepared from these cards while the same cards are used to prepare statistical reports to the I. C. C. covering employees service and compensation, overtime and aggregate mileage. When the train and enginemen time cards are being tabulated for intermediate payrolls, other cards known as payroll summary cards, are automatically punched to include total earnings, miscellaneous and railroad retirement deductions and the amounts due, from which payrolls and pay checks are produced.

Roadway Payrolls

Other cards are punched with the details of station and roadway time keeping. However, the information is not obtained from daily reports, as in transportation time keeping, but from pretyped time rolls which are prepared on the machines from the name cards of each station employee in service. These time rolls are mailed to station and roadway gangs in time to reach them prior to the first day of the pay period and the time worked by each employee is entered daily by the agents or foremen and the time rolls returned to the accounting department immediately after the close of the pay period. Detail time cards are then punched for each employee, showing the time worked, rate of pay, I. C. C. classification, account, etc., and from this information summary cards are punched for payrolls and paychecks. The I. C. C. record of service and compensation, overtime reports and accounting distributions are obtained from the details cards.

Shop Labor

Other cards are punched with the detail of mechanical department time keeping, except that in this case the time

worked is obtained from daily service cards mailed to the accounting office. The time cards allow for 16 items of information, including class of employment, occupational code, the identity of the shop, department, locomotive, day, as well as the class of time, hours worked, rate, amount, pension deduction, and amount earned less pension. The distribution of shop labor is made with the aid of other cards which have been prepunched for different hourly rates of pay and hours worked and the amounts extended.

As the service cards are received, those rate cards corresponding to rates and hours on the service cards for various operations are pulled from the racks and placed in pockets, one for each account. The cards are taken from the pocket and put in the tabulating ma-

The image displays a vertical stack of 40 punch cards, each designed for a specific accounting function in a railway system. The cards are organized into several sections, each with a title and a grid of fields for data entry. The fields are typically represented by small rectangular boxes, some of which are pre-filled with numbers or letters. The cards are stacked on top of each other, with the top card being the most visible. The cards are printed on a light-colored paper, and the punch holes are visible along the edges. The overall layout is clean and professional, reflecting the precision required in railway accounting.

40 Varieties of Accounting with A Punch Card for Each Variety

chines and the intermediate totals simultaneously punched into summary cards to be used in preparing monthly distributions. Summary cards enumerate the year, month, day, general shop or division, department shop or location, the primary account and subdivision, class of work engine or car number, A. F. E. or shop order number, as well as the hours worked and the total cost.

Employees names and account numbers are punched into their time cards from prepunched master name cards and the payrolls and pay checks are automatically printed from the payroll summary cards by an electrical alphabetical printer. These cards are also used for reporting earnings to the railroad retirement board and income tax and unemployment insurance. The mileage statistics on enginemen's detail time cards are co-ordinated on another set of cards for use in assembling engine mileage statistics for various purposes.

The cards used for the final accounting of payrolls, materials, fuel, miscellaneous supplies, bills, vouchers, etc., are punched to show 13 items of information, including the division, subdivision, and the state, as well as the primary account or other classification number for use at the close of the month's business when the division operating statements are produced and the operating expense portion of the railroad's income account is prepared.

Shop Orders, Empty Miles, Grain Doors

Other cards are key punched to furnish a separate record of the labor on shop orders, the information being punched from that reported on shop employee's daily service cards, after which extensions are made on the mechanical multiplier and the totals tabulated by shop orders. Still other cards are punched from freight conductor's wheel reports to produce various operating statistics, including net ton miles and the loaded and empty freight cars miles, caboose miles, train miles and train hours for use in reporting monthly statistics to the Interstate Commerce Commission or in assembling the corresponding statistics by railroad subdivisions.

Another series of cards has been designed to keep track of grain doors. The date, forwarding station, car number, receiving station, and the quantities are cut from agent's reports and from these a perpetual inventory of grain doors on hand is maintained. Movements from one station to another are debited by punching the information from the agent's monthly grain door reports and the tabulation by car numbers into and out of each station is checked to substantiate the perpetual inventory and to conserve expense.

Cards are punched from freight conductors' wheel reports for two days each month to record the location of cabooses by operating divisions. Other cards are punched from passenger conductors' wheel reports showing the date, number and mileage of suburban passenger cars. A monthly tabulation produces statistics for the I. C. C. and shows the total mileage by individual cars.

The per diem earnings on Rock Island cars on foreign railroads are punched into cards from foreign line monthly per diem reports. These cards are sorted by individual car numbers and printed. The printed statement is checked against the running record of cars to protect all per diem receipts, and claims are made for shortages at the same time. The per diem cards show the month in which the per diem was earned and allowed, the road, the car number, and the days.

Freight Accounting

Cards are key punched from interline received waybills reported by agents and these cards, in conjunction

with addressograph plates showing routes and divisions applied, are used in preparing interline freight abstracts and recapitulations, and also to permit the exchange of waybills and statistical cards between carriers, eliminating man failures on divisions, in typing abstracts and in striking balances.

For checking unreported waybills and balancing advances and prepayments, cards are punched from forwarded agent's abstracts on all advances and prepaid items and are balanced to each month's agents monthly recapitulation. These cards are matched with cards punched from agents received reports and reports rendered by foreign lines, whereupon those amounts reported at destination which are equal to amounts billed are mechanically matched and cleared. Cards that do not match in the machine are tabulated and printed, showing the amounts of discrepancy, and discrepancy cards are cut and filed with the original tabulation. These cards are matched with adjustment cards covering agent's debits, credits and adjustments by foreign lines, thus affording the process of eliminating adjustments and keeping accounting differences in balance.

Another series of cards containing similar information are cut from the agent's report of local waybills received and waybills terminating on foreign lines. Lists arranged according to waybill number order indicate the missing numbers in waybill records.

Another set of cards show a statement of differences between the revenues due from other lines as a result of incorrect interline settlements. Cards are cut from each statement of differences issued, showing the statement number, the debtor road, the amount due, etc., and are retained in an open suspense file pending the receipt of adjustment notices. When notice is received, the card is pulled from the open file and placed in a pending file. The cards are matched each month with cards cut from correction accounts issued by foreign lines and the cards which do not match are checked with the amounts allowed and the differences noted. The method followed eliminates the manual tracing of unadjusted items and affords an accurate record of outstanding amounts and a means of policing them.

Net ton mile statistics by commodities are prepared by maintaining master mileage cards which have been prepunched to show the mileage between the points where the tonnages are handled. These cards are matched with statistical summary cards and the mileage automatically punched into a summary card.

Station Accounting

In connection with station accounting, detailed cards are cut from original waybills received and from copies of outbound waybills, covering prepaid or advance items forwarded, also miscellaneous items such as demurrage, storage, etc., and the amounts to be collected are cut into the cards in addition to other statistical data. Summary cards are automatically prepared each day to cover the total accruals by classes of revenue and they are accumulated monthly in preparation of the agent's monthly summary. At the same time other cards are prepared from collection reports showing the station and the amount collected. The accrual and collection cards are then matched mechanically. Unmatched cards represent uncollected accruals and are listed and sent to each agent after the close of each month.

Still other cards are key punched to show remittances from agents. This information is punched direct from agent's daily remittance reports, showing the month and day received, the bank, the month and day forwarded, the balance sheet number and the amount of the remittance,

and tabulations from the cards are used to insure prompt remittances from agents, as well as to keep bank balances in control. The monthly tabulation by forwarding stations and balance sheet numbers is a check on the monthly balance sheets.

The machine applications have also been extended to include card records of casualty claims and unadjusted claims for loss and damage.

Rapid Material Pricing

In rearranging its methods of pricing material to bring them within the scope of machine operations, the Rock Island completed the one thing remaining to do as thorough a job of modernizing its material accounting as was done in revenue, wage and other accounting and found a new answer to the controversial question of bin prices versus price books, as the machine methods in effect are neither. The difference is that, for the general run of material used on the railroad, prices at which the material is to be charged out never reach the material requisition. Instead, they wait on punch cards in the machine bureau where they are automatically matched with cards key punched from requisitions whereupon automatic sorters, multipliers, and calculators do the rest. Machine applications were already in use on the railroad to account for material after the pricing work was done but the prices were applied to the requisitions and extensions



Matching Daily Shop Service Time Cards with Rate Cards Preparatory to Machine Accounting

made on comptometers before the information was ready for machine accounting.

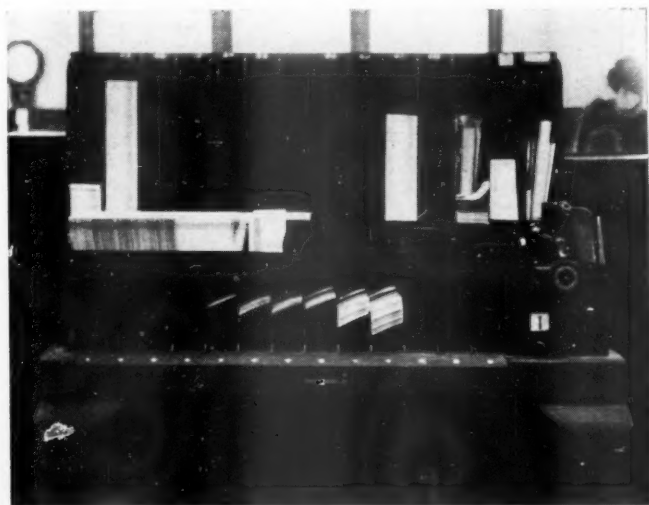
At present approximately 45,000 items of material are carried in store stock and the total number of items to be priced and accounted for monthly averages around 250,000. The problem is to see that all this material is correctly charged to the work for which it is used and properly reflected in all records and statements of materials that are required on the railroad, not forgetting records of material on hand and statistical statements prepared for the more efficient administration and control of the stock.

This problem is relieved somewhat on the Rock Island by the practice of carrying all materials in a system material balance instead of maintaining division, store or other regional balances, so that no pricing or accounting is necessary for transfers between stores. Again while

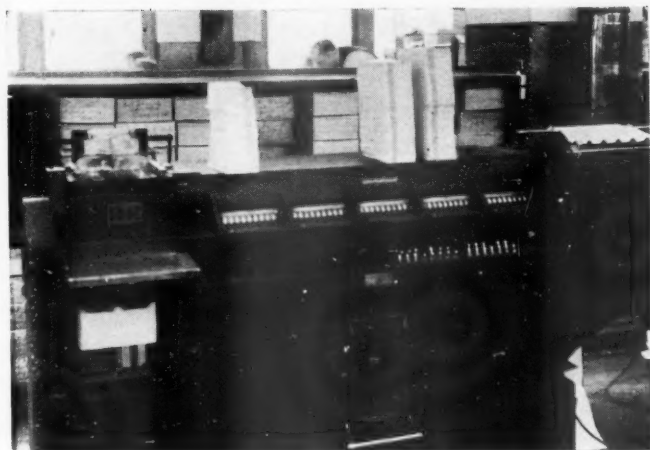
rail, ties and ballast are charged to operating expenses or other accounts from monthly reports, all other materials and supplies on the railroad are charged direct from requisitions. In other words, users now obtain their supplies, in effect, on a C. O. D. basis. Accounting by means of reports made after materials are used has been discontinued. Even with these modifications in practice, however, the details of material accounting are voluminous and exacting.

A Code for Every Item

To identify the 45,000 items of material for the purpose of machine operation each item is given a code number which is listed in the railroad's price records and stock books, applied to bin labels and requisitions and which,



Sorting at the Rate of 400 Cards Per Minute



An Adding and Tabulating Machine. Punched Cards at One End. Tabulating Paper at the Other End

when punched into cards, serves as the key to all operations where the identity of the material is involved. A combination number is used, the first two figures giving the number of the standard material classification in which the material belongs while the other figures give the serial number of the item. With classes of material which are subdivided in the standard classification, the standard classification number is given to the first subdivision and other subdivisions are assigned numbers from 51 up. Thus where the standard classification di-

vides Class 2 into Class 2-A, interlocking and signal materials, and Class 2-B, telegraph and telephone materials, complications in machine work are avoided by giving Class 2-A the group code number 2 and Class 2-B the code number 52. Sequence codes are then assigned to each item in the order of their occurrence in the stock book. The first and last items in Class 23 are thus coded 23-1 and 23-6422. The location of each store is also coded.

No Prices on Requisitions

When filling requisitions, stockmen enter the code number of each item of material on the requisition and it has already been developed that less work is required to apply these code numbers than to make corrections in the description of the articles in order to make requisitions intelligible. While the tags on the material bins or other containers at stores show the unit prices of the material, as well as the description and the code number, the bin prices under present practice are there only for educational purposes. Not only are they not applied to requisitions but they are also no longer revised with changing material prices to meet the requirements of material accounting. The one important thing on the bin is the code number.



The Collator (in the middle) Matches Quantity Cards with Price or Rate Cards at the Rate of 400 Cards Per Minute. The Other Two Machines in the Foreground Are Gang Punches

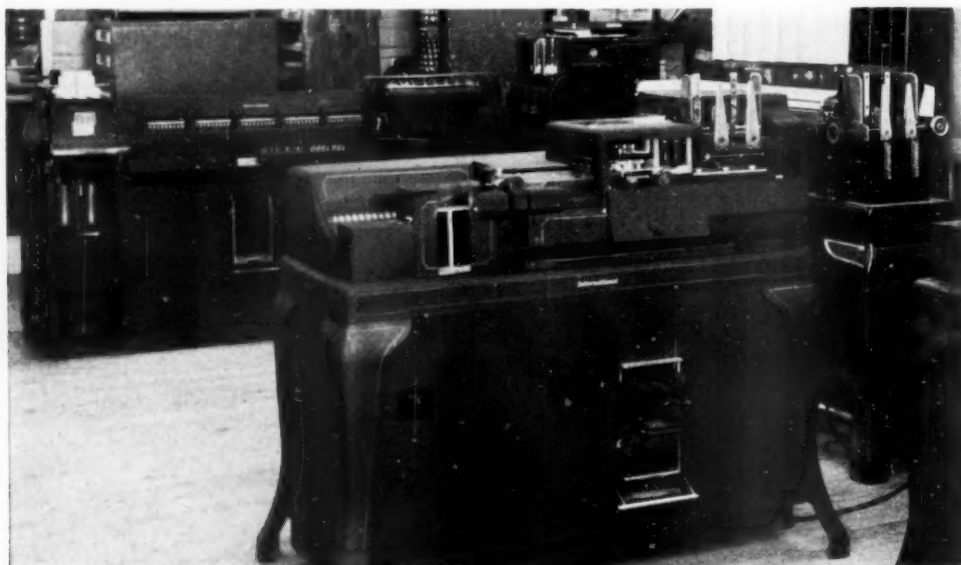
Prices for accounting purposes are all prepared and checked in the accounting department. Previously the price records were kept in bound copies of the annual inventory but this was cumbersome and was supplanted two years ago by a set of loose leaf ledgers in which a separate card, of the visible type, marked with the standard stock book description, is kept for each item of material. The prices are calculated from approved invoices and revised whenever the routine process of checking invoices against the price justify such changes.

A Machine Card for Every Article

Unit prices are adapted for machine operation by preparing a master price card for each item of standard material. This card is prepared on the alphabetical printing punch which stamps the card with the description of the material and unit of measure in writing as well as in

code and punches other holes representing the kind of material (whether new or second hand) and the material class number and serial number as well as the unit price. Each card also has a space in which to punch one change from the original price, together with a code symbol which will assure that in all subsequent calculations the revised price will be used instead of the original price. As these

When the shop requisitions reach the accounting office, accounting clerks sort them by operating expense accounts and a material clerk inspects them to assure that the quantities are given in the proper units of measure. The requisitions are then sent to key punch operators who punch the necessary information into cards. Requisitions chargeable to steam locomotive repairs and to



The Multipliers Automatically Multiply the Quantities on Detail Cards by the Price or Rates on Other Cards and Punch the Cards with the Result at the rate of 20 to 25 Cards per Minute

cards are key punched they are sent to the price bureau where they are verified and filed. Whenever a change in price is entered in the price book, the corresponding price card is taken from the card file and sent to the machine department where the price change is punched into the card and the cards then returned to the pricing bureau for verification and filing.

Average prices are maintained in the case of 52 groups of materials such as bolts, nuts, grey iron, steel castings, lumber, etc., so that all items having the same average price are given the same group and sequence code in the usual pricing operation, the effect of which is to speed up the pricing of these materials. This procedure, however, is not followed in pricing inventories.

When materials are permanently removed from stock the pricing bureau as well as storekeepers are notified by the general storekeeper and this office likewise assigns codes to all articles added to stock so that proper revisions can be made in the stock books and price cards.

Shop Requisitions

Materials used by shop forces are obtained from the stores on the conventional shop material requisition, one class of material to a requisition. The number of items so ordered averages around 180,000 per month. Each requisition indicates whether the material is for freight, passenger or other service, gives the locomotive, car, shop order or A. F. E. number and quantity, expressed in the lowest pricing unit. The requisition also shows the material class and the sequence code.

The price and the amount columns on the requisition are used only for special items of material for which no code number has been assigned, such as material shipped direct to shops without passing through the stores account. Such items are manually priced and extended by comptometer operators before a card is punched for use with the other cards in the final material distributions and accounting.



The Alphabetical Printer Automatically Decodes the Punch Cards and Writes Payrolls and Checks

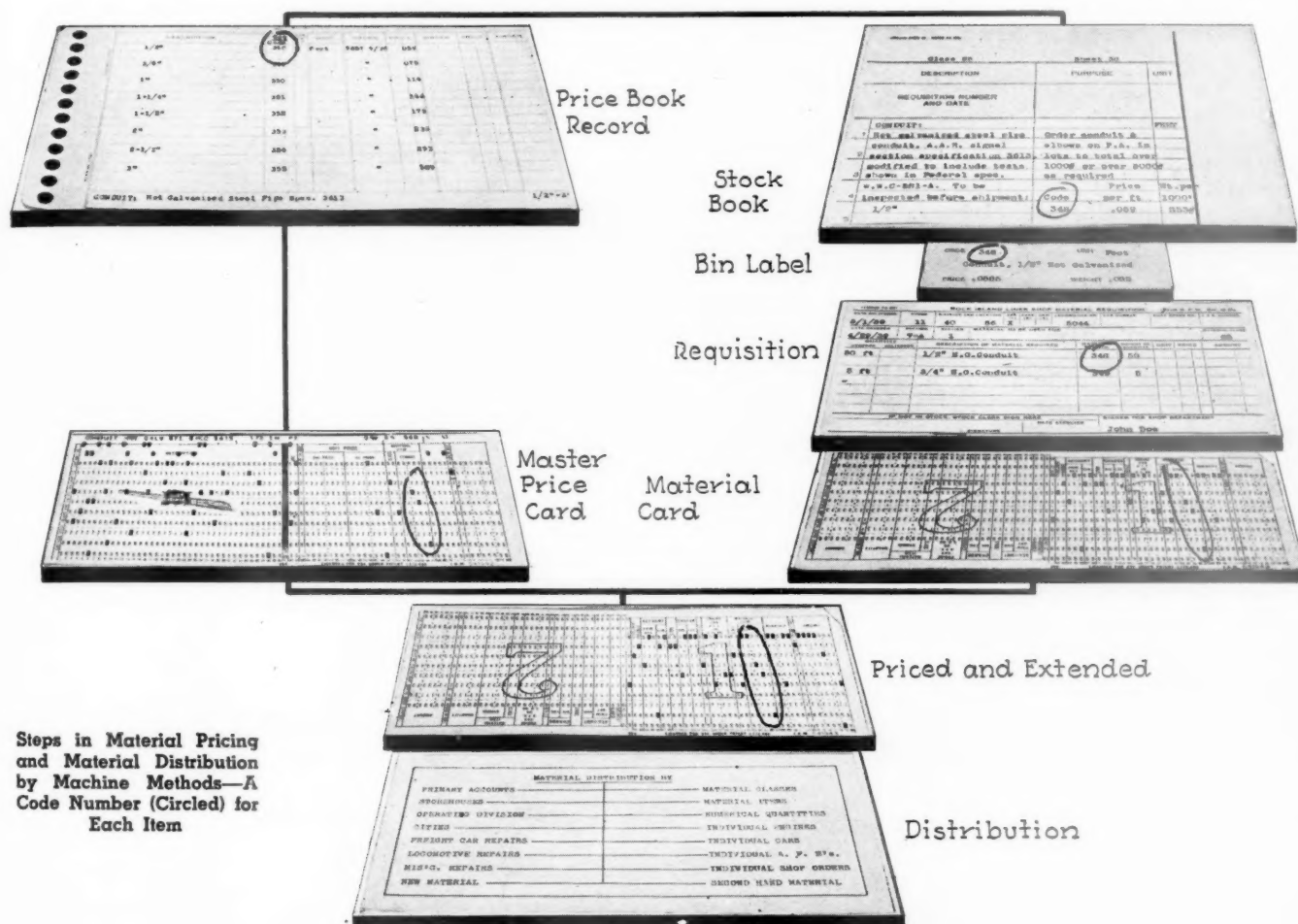
freight train car repairs are generally accumulated with sufficient rapidity to warrant the preparation of these cards daily while cards covering requisitions chargeable to accounts which are not accumulated rapidly are prepared once or twice each week. The cards are designed so that they can be used twice and are punched to show in code the date, the document number, the primary account and the sub-account, the store, the division and the location, the service (whether freight or passenger) the engine, car, A. F. E. or shop order number and the material class and sequence code, the kind of material (whether new or second hand) and the quantity and they have additional columns in which to insert the total values after they have been calculated.

By accumulating requisitions until a considerable num-

ber chargeable to the same account are ready to be key punched, the date, document number, account and sub-account, store and division can be repeated automatically in several cards as in gang punching, thus speeding up the key punching operations.

At the close of each week cards which have been key punched are mechanically sorted by material code numbers and automatically matched with the corresponding price cards. The matched cards are then taken to the

requisitions, the cards for shop, roadway, transportation, and materials, are mechanically sorted by material classes and a final summary card produced for the total of each material class. These final summary cards are then tabulated to get the total disbursements of material by classes and a grand total for accounting entries, material balance sheets, etc. These cards can be further sorted to determine disbursements by stores. Finally the detail cards are mechanically sorted and tabulated to prepare



Steps in Material Pricing and Material Distribution by Machine Methods—A Code Number (Circled) for Each Item

multiplier where the value of the material is automatically computed and punched into the amount column of the detail card, after which the master price cards are mechanically sorted out and filed. The detail cards are then mechanically sorted by operating expense accounts, sub-accounts, division, location, etc., respectively, the amounts on these cards are then tabulated and totals for each account, sub-account, division, location, etc., automatically punched on summary cards to preserve the totals of each separation. When all material requisitions for the month have been processed, the cards carrying intermediate totals are sorted and final summary cards for the month are produced, from which the charges to operating expenses or other accounts are obtained.

Roadway Materials

Materials for sections, bridges and buildings, water service, signaling, transportation and miscellaneous services which are charged direct to operating expenses or other accounts, are ordered on a more detailed requisition form. otherwise they are coded and processed in the same way as the requisitions for shop materials.

After summary cards have been produced from these

statements of costs of repairs to locomotives, cars, shop order costs, details of A. F. E. work, costs of operating branch lines and any other data desired.

New Inventory Methods

For inventory purposes, a special card has been designed for use in taking the inventory as well as in pricing it. The cards will be produced from the master price cards, excluding group average price cards, so that the description of the material and the material code will appear at the top of the card to enable stockmen to compare the card with the material and the card will have spaces in which to enter the quantity of material on hand.

To inventory materials ordinarily subject to average prices, a price card will be prepared for each item of material so that each item can be entered on the inventory with the proper description. The sequence codes for such materials begin with number 8,000 in each group, which automatically separates this material from all other items in the stock books.

When the inventory cards are returned to the accounting department from the stores, marked with the quan-

tities on hand, the quantities will be key punched into the same cards, the cards matched with price cards, the prices automatically punched into the cards, and the total computed and inserted by the multiplying machine. The cards will then be sorted in group and sequence code order and run through the alphabetic accounting machine and the inventory printed in duplicate on inventory blanks prepared for the purpose, one copy to be retained in the accounting department and the other forwarded to the store.

Speed and Flexibility

This method of accounting for material, while permitting greater accuracy, uniformity and speed in the entire operation at less expense and confusion, has also permitted the production of statistical reports which were not previously available and it has given great flexibility to accounting and statistical work. Price lists may now be printed on the machines from the master price cards and furnished the mechanical or other departments to keep them informed as to the cost of materials being used, simply by running the cards through the alphabetical printer. Comprehensive statements of quantities of different kinds of material consumed by the road can also be prepared.

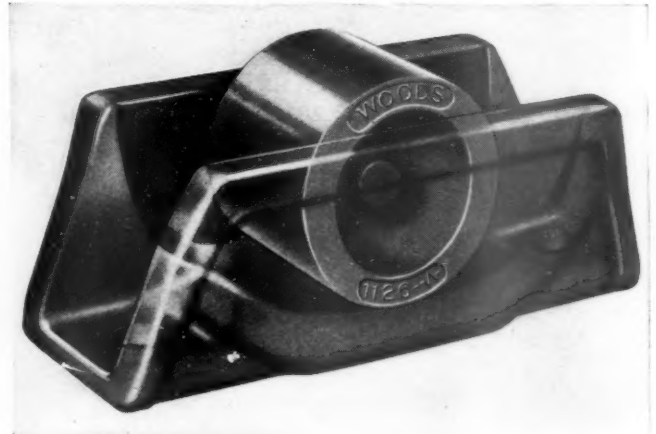
One of the more recent by-products is the monthly statement of locomotive repairs in which the cost of labor, the cost of material and the cost of other items of expense are given for the current month and on an accumulated basis by divisions, classes of power and by individual locomotives. Detailed reports of the cost of operating and maintaining this railroad's diesel power are also prepared at the present time and a more efficient budgetary control of expenses at different shops has been introduced in the form of a seven-day statement showing the cost of material used at different shops,—a statement which is made available within four days after the close of business in any week for any seven-day period.

With all these and other applications under control, the railroad now has immediately before it the refinement of its production schedules and the extension of the work to include dining car, passenger train accounting, and car records.

Roller Side-Bearing Is Improved

IMPORTANT improvements have been made recently in the gravity-centering type of roller side-bearing which Edwin S. Woods & Company, Chicago, has developed to meet A. A. R. specifications and which has been applied in the past few years to thousands of railroad freight cars of all types.

The rolled-steel, heat-treated roller formerly used in this side bearing has been replaced by a forged-steel roller



Improved Woods Forged-Steel Roller Side Bearing

which provides additional strength, and, together with a forged-steel housing of strong but lighter design, reduces the weight of the bearing by 20 lb. per car set. The new roller, with a 4-in. outer diameter and 3-in. wide face, has equalized metal sections, by virtue of the web and rim construction, illustrated, which permit more uniform heat treatment throughout. The rim of the roller is 3/4 in. thick and the web is of the same thickness, thus assuring

(Continued on page 988)

CONDUIT HOT GALV STL SPEC 3613 1/2 IN FT										25 348 2065 059 1 3500									
DESCRIPTION										QUANTITIES ON HAND									
MATERIAL										ITEM									
INVENTORY										AMOUNT									
SCRAP										UNIT PRICE									
SECOND HAND PRICE										QUANTITY									
SCRAP PRICE																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Facsimile of Card for Taking Annual Inventory

Cards first printed and punched with Description of Material—Material then counted and shown on Card—Card then returned to Machine Bureau, co-ordinated with Price Cards and automatically multiplied on Machines

A Peek at "Railroads on Parade"

High-spots of the Eastern railroads' pageant at the New York World's Fair depicting a tale of men and machines

ASSIGNMENT editors on newspapers and magazines were in a quandary when "Railroads on Parade" opened at the New York World's Fair. They wondered whether to review the show under the heading "industrial exhibits" or as a stage musical in the dramatic section. Then when scouts reported complicated movements of horses, oxen, bloodhounds, Indians and cowboys on an open air lot over by the railroad building, they tried to recall a good man to cover circus assignments. Ultimately the press realized that "Railroads on Parade," like Edward Hungerford's previous railroad pageants, defies pigeon-holing, and set apart space for it as a "special dramatic feature."

Full of Technical Novelties

The script of the show calls for the massing of such a large number of players, dancers, riders, musicians, locomotives, animal-drawn vehicles and general stage properties, all to play parts on a grand scale, that it was necessary for the direction staff to exploit entirely new devices to meet the situation. Thus the spectacle is presented on a three-level stage 250 ft. wide by 100 ft. deep. The fore-stage not only contains two standard-gage tracks adequate to support the largest modern steam locomotives but is paved with a gravel mixture as well for the passage of horses and wheeled vehicles. The middle level has a wooden floor suitable for ballet-dancing while the upper level is slotted with a channel at the rear to care for stage ships, canal boats and "prop" locomotives whose wheels and method of propulsion must be sunk out of sight.

The rapid succession of scenes and the impossibility of using a curtain demand special treatment for changes of setting. This is accomplished by the installation of a large turntable at either end of the middle stage upon which are placed "flats" of various buildings and scenic effects which can easily be revolved into desired positions.

The extent of the stage of "Railroads on Parade" precludes the use of spoken dialogue. The staff therefore set up what is believed

to be the first system of co-ordinated sound-rooms ever used in the theatre. Several sound-insulated rooms are hidden under the fore-part of the spectators' stand, each fitted with a window giving a view of the entire stage. In these, before microphones, are closeted an orchestra of 25 members, a choir of 16 vocal artists and 5 "sound-actors." The latter actually produce the dialogue which the actors on the stage merely pantomime, co-ordinating sound with action by watching the actors closely through the sound-room windows. Dialogue and music are relayed through a control desk and broadcasted through loudspeakers to the audience. In addition, two narrators in costume,—each an experienced star of the legitimate stage—are stationed in the wings to deliver the verse-recitative which carries the sequence of the show.

A Complicated Aggregation of Men and Machines

The statistics of "Railroads on Parade" are impressive. Its covered spectators' amphitheatre seats over 4,000 persons. Its cast comprises over 250 actors and actresses, who wear 1,000 men's and 400 women's costumes during the course of the drama. Two shifts of 12 stage-hands each are required to move the sets and handle properties.

Assisting the human cast, there appear in the show 50 horses, 4 oxen, 4 mules and 20 locomotives under steam. The latter require the ministrations of 6 engineers, 4 firemen, 1 brakeman and 6 wipers, all of whom are furloughed railroad men, while the four-footed "motive-power" is tended by some 20 stablemen. Two further members of the cast were obtained from Billy Rose's shop on Second avenue in New York,—two long-eared bloodhounds which appear from a baggage car of the 'Seventies in Act IV, Scene 1, as the treasured possession of an "Uncle Tom's Cabin" troupe. The personnel of the entire show totals over 400 and the stages, grandstand, "backstage" and yard cover 5½ acres.

Dramatic critics agree that "Railroads on Parade" is most akin to light opera. Kurt Weill, a well-known composer for the stage has written an orchestral background for the entire piece and a



TO DO FULL HONOR TO

THE AMERICAN RAILROAD

in more than One Hundred Years of
its Triumphant Success there will be
presented Each Day at the

NEW YORK WORLD'S FAIR - 1939

a huge dramatic SPECTACLE of Growth & Achievement
with Words by Edward Hungerford & Music by Kurt Weill
& employing a cast of 250 Men & Women, 50 Horses &
20 LOCOMOTIVES, Old & New, all operating under their own steam

RAILROADS ON PARADE

The ENTIRE PRODUCTION will be one of Sumptuous
Magnificence on a scale never before conceived &
employing every Modern Method of the Theater to
present a Picture of Great STRENGTH & BEAUTY-
HUMOR & ACHIEVEMENT upon the Largest Stage ever
built in New York & facing an Amphitheater enclosing 4000

When You come to The FAIR, You cannot afford to miss
the 17-acre EXHIBIT of the RAILROADS & this Triumphant Rail Pageant

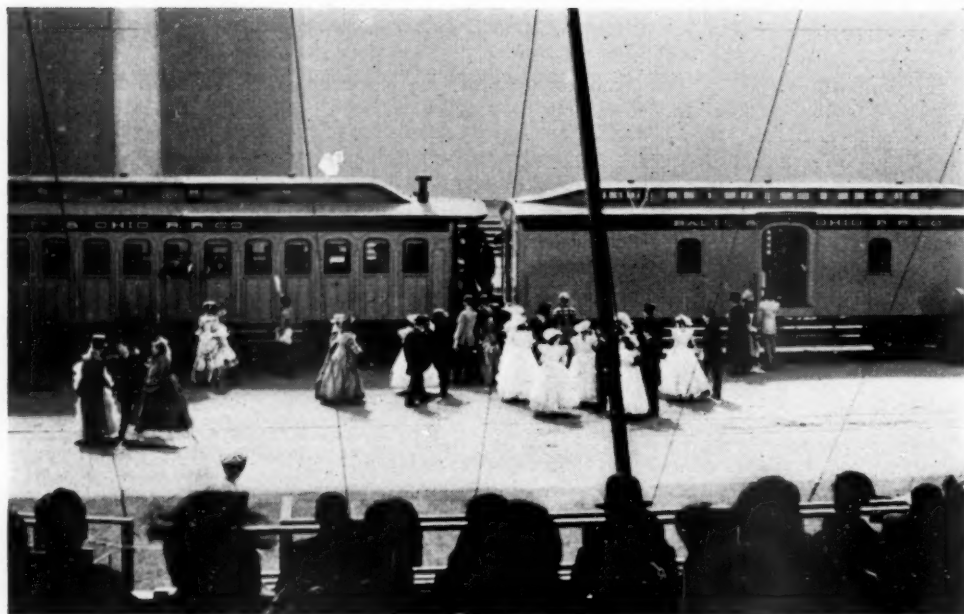
RAILROADS ON PARADE

Copyright 1939 by Eastern Railroad Co.



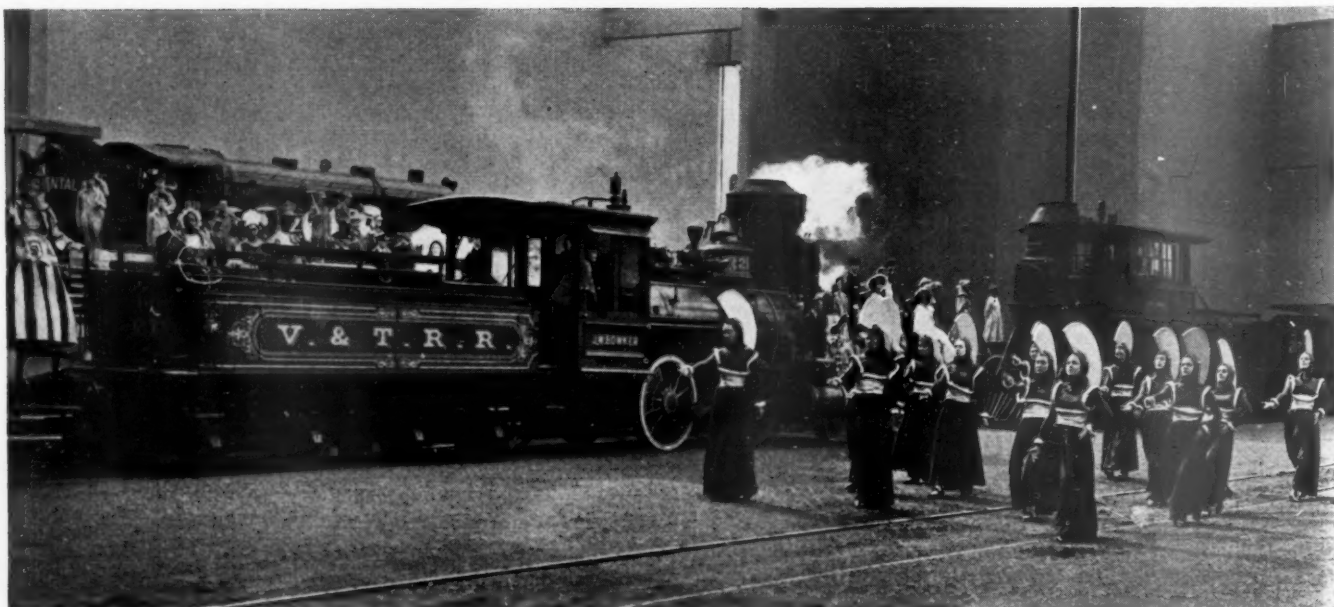
Stage-Coaches Pass in
"Railroads on Parade"

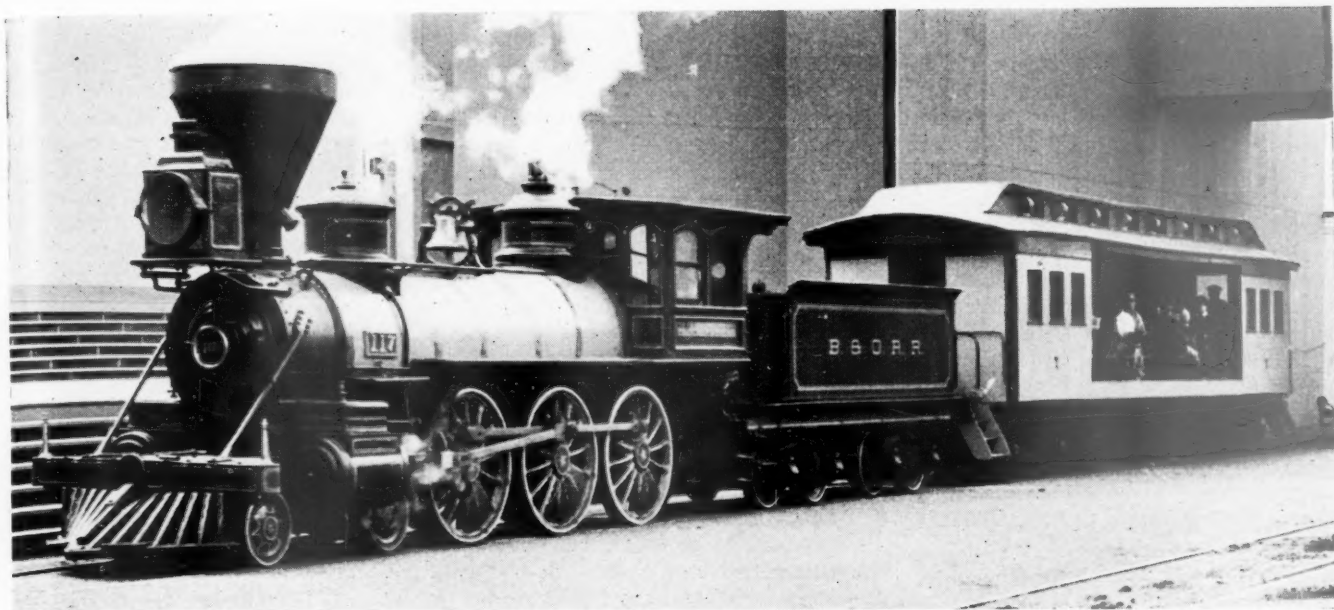
Below: The Original "Atlantic" of
1832 Gives 'Em a Jolt in an Early
Scene



Left: An Accommodation
Train of the 'Seventies

Below: Finale Scene Show-
ing Virginia & Truckee's
"Bowker" and the B. &
O.'s "Ross Winans"

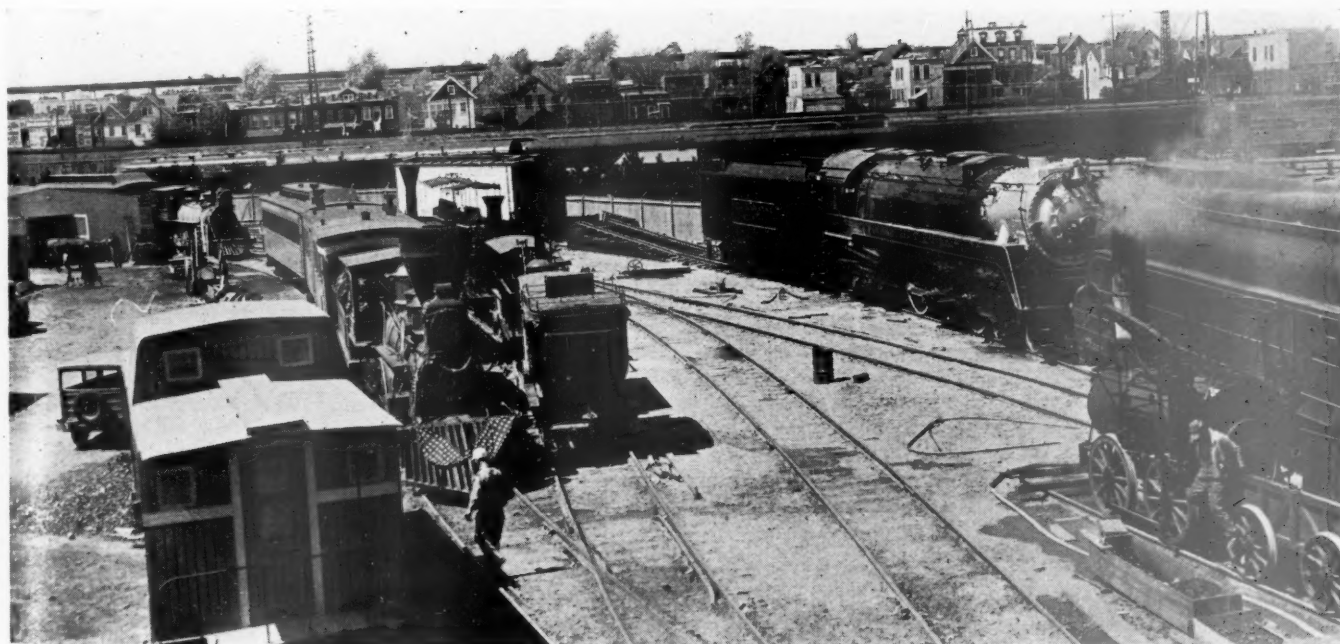
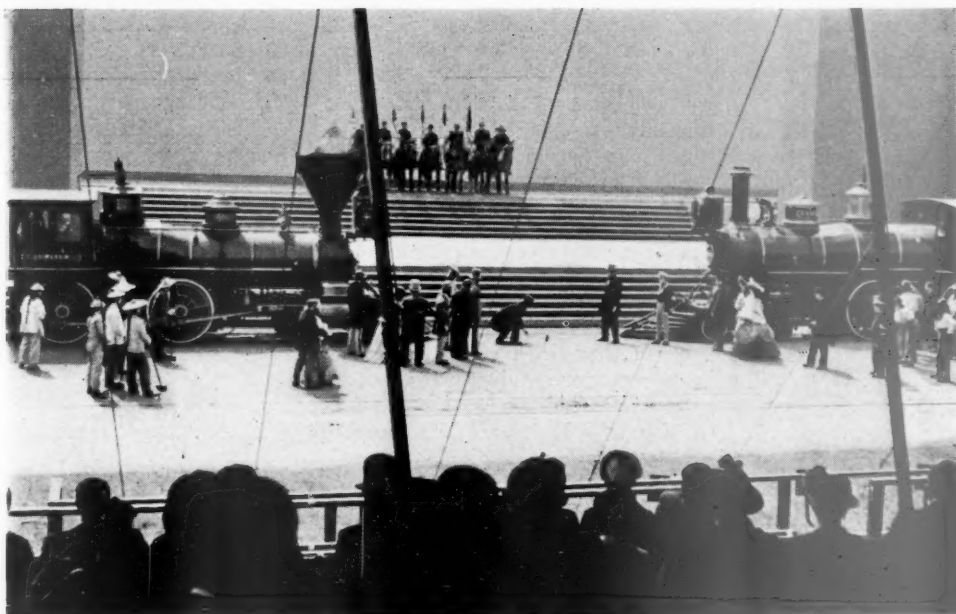




Above: The "Thatcher Perkins" Hauls an Old-Time Coach Bared to Show the Doin's Within

Right: High Point of the Show. Driving the Golden Spike at Promontory Point

Below: "Backstage," Showing Yard Tracks and Stables in Left Background



series of songs, choruses and dances which are an important element in the pageant. One of the song numbers "Mile After Mile" is scheduled for separate publication as a popular dance number and railroaders may soon hear the neighbors' radio sound forth in "that tune from the railroad show in New York." In addition, the show partakes much of the drama, with straight dialogue and direct action for the more important scenes.

At the same time true pageantry is represented by the passage of canal boats, carriages, covered wagon caravans, riders on horseback and real locomotives across the stage. Those of the latter which appear in the show under steam follow in order of appearance:

<i>Name and Date</i>	<i>Present Owner</i>
Stourbridge Lion (replica) (1828)	Delaware & Hudson
Best Friend of Charleston (replica) (1830)	Southern
DeWitt Clinton (replica) (1831)	New York Central
Tom Thumb and train (replica) (1829)	Baltimore & Ohio
Galloway (replica) (1836)	Baltimore & Ohio
Atlantic (1832)	Baltimore & Ohio
Wm. Crooks (1861) and train	Great Northern
Genoa (1871)	Virginia & Truckee
Pride of the Prairies No. 35	Chicago, Burlington & Quincy
(The two locomotives above appear respectively as the "Jupiter" of the Central Pacific and No. 119 of the Union Pacific in the "joining of the rails" scene at Promontory Point.)	
Wm. Mason (1857) and train	Baltimore & Ohio
Thatcher Perkins (1863)	Baltimore & Ohio
J. W. Bowker (1875)	Formerly of Virginia & Truckee
Loaned by R. & L. Historical Society, Pacific Coast Chapter.	
Ross Winans (1869)	Baltimore & Ohio

At the very end of the pageant, amidst a fanfare of voices and instruments, two of the latest steam locomotives are driven from either side of the stage to stand pilot to pilot in the center. These are selected from motive power rosters of various carriers and are varied each month. In May, the Delaware, Lackawanna & Western's re-styled No. 1939, a 4-6-4 type, appeared with the Pennsylvania's streamlined No. 3768, a K-4-S "Pacific." This month the latter is mated with the New York Central's "Commodore Vanderbilt," a streamlined "Hudson," while in July the latter will rub noses with the Canadian National's No. 6406, a 4-8-4 type which participated in the tour of their British Majesties through Canada. The following month, C. N. R. 6406 will be joined by the Canadian Pacific's No. 2850, a "Hudson" which also drew the royal train. In September the New York Central and Pennsylvania locomotives will return to do the finale.

Cars not mentioned above which are used in the show include a replica of an early horse-drawn car of the Baltimore & Ohio; the first railway mail car to be used in the United States, of the Burlington; and a modern Pullman lounge car called "Luxuryland" specially designed by the Pullman Company for the show with one side cut away so spectators may watch a scene staged within. Roller screens are drawn between acts to protect the interior. The Boston & Maine furnished a Concord stagecoach appearing in Act III.

"Railroads on Parade" runs just one hour and is presented four times daily, except Mondays, at 2, 3:45, 5:30 and 8 p. m., with strict railroad punctuality as to "leaving" and "arriving" time. It is made up of 5 acts and a prologue and epilogue, comprising 15 scenes in all. The prologue and first act cover pre-railroad days; the second act comprises 3 scenes of the earliest railroad operation, using famous pioneer locomotives as the chief actors. Herein, for instance, the grasshopper-like "Atlantic" kicks up its heels in a frenzy of wheel-slipping,

affording rough treatment to the costumed passengers in the Imlay double-deck coaches behind. The third act contains scenes of the Overland Trail; "Lincoln Rides the Railroad" (Lincoln played by Charles Keane); and the high-point of the show,—driving the golden spike in the completion of the first transcontinental. At this point Mr. Weill has set Bret Harte's poem "What was it the engines said, Pilots touching head to head" to music incorporating the actual whistles of the two locomotives on the stage,—the "Jupiter" of the Central Pacific in a full-throated basso, and Union Pacific No. 119 in a baritone of the more effete East.

Humor is featured in Act IV which portrays "depots" and trains of yesterday and today in a profusion of color, dancing, pantomime and music. It is here that the latest Pullman lounge car is drawn on the stage with its side removed to show the comforts and antics of the passengers within. Act V. contains scenes designed to show the railroads at work, including a dialogue scene within a typical caboose and a portrayal of operation in time of flood through a scenic dispatcher's office and signal tower set up on the turntables and a 2½-ton "prop" locomotive erected on the chassis of a former Fifth Avenue (New York) bus. The epilogue brings in several "old-timers" under steam, the entire ensemble and ballet and two modern steam locomotives in "The Railroad Triumphant."

The words of "Railroads on Parade" were written by Edward Hungerford, known for his direction of the "Fair of the Iron Horse" at Baltimore, Md., in 1927, "Wings of a Century" at the Chicago fair in 1933, and "Parade of the Years" at the Great Lakes Exposition. The music was written by Kurt Weill, composer of "Knickerbocker Holiday," last season's musical "hit," and the show staged by Charles Alan, associated with Max Reinhardt in "The Eternal Road." Gilbert H. Kneiss is technical director.

Improved Roller Side-Bearing

(Continued from page 984)

equal heat penetration and uniform strength in all parts of the roller. The heat treatment provided gives a hardness of 320 Brinnell with S. A. E. 1050 steel. Each roller weighs 2½ lb. less than the earlier design.

The forged-steel roller housing of the same general design as formerly employed, is made of S. A. E. 1060 steel, heat treated to a hardness of 310-320 Brinnell, and has the side-wall thickness reduced from ½ in. to ⅞ in., which saves another 2½ lb. per housing. The roller is centered by gravity, as in the earlier design. Minimum clearance is provided between the housing side walls and the roller, thus assuring a true position of roller at all times. The roller-stops, at the limit of travel, are of the same contour as the roller and contact it through one-quarter of its circumference. The slight slippage which occurs at the end of the travel causes the roller to return to the center in a new position.

Recent tests of this roller side-bearing, conducted by an independent physical testing laboratory, indicate that it has been designed with a large factor of safety. The roller was tested between two hardened-steel plates under a load of 300,000 lb., the maximum pressure which could be exerted in the testing machine. It is reported that with this load, far in excess of any pressure encountered under the most severe service conditions, the roller showed no evidence of distress or prospective failure, the outer diameter of 4 in. being reduced only .05 in. at the line of contact with the hardened-steel plates.

Fewer Buildings — More Money

Removal of approximately 930 structures from the D. L. & W. during the last 8 years has saved the road large sums in taxes and maintenance

The Delaware, Lackawanna & Western is cleaning house of unnecessary buildings and is breaking up what are, on this road, termed "Railroad Yard Villages." Six hundred buildings were removed during the last three years and 300 more have been earmarked for early retirement in a concerted program to reduce unnecessary expenses to an absolute minimum

SINCE 1930, and more particularly during the last three years, the Delaware, Lackawanna & Western has conducted a systematic and continuing program of building removal with the object of reducing taxes and maintenance costs, eliminating fire hazards and generally improving the appearance of the property by the elimination of unsightly structures. In this program, the railroad has not only taken advantage of developments of recent years that have rendered many structures unnecessary or inactive, but as an essential phase of the campaign it has in many instances brought about the consolidation of activities in certain structures in order to release others from active service and thus make them available for removal.

To date the program has resulted in the removal of approximately 930 buildings, while 300 additional structures have been earmarked for retirement and are being removed as rapidly as possible. Approximately 600 of the buildings removed to date have been retired in the last three years, during which period the program has been prosecuted with increased vigor and on a more systematic basis.

Large Savings Effected

As a result of the progress made so far, the railroad is realizing an annual saving of about \$10,000 in maintenance expenses and of about \$750 in taxes, to say nothing of the sizeable sum realized through the sales of retired structures. Moreover, since practically all of the buildings removed have been old frame structures, many of which presented an unsightly aspect, the fire hazard at many locations has been materially reduced and the appearance of the property has been improved.

An interesting aspect of the Lackawanna's building removal campaign is that it is not looked upon as a temporary activity to be terminated on the achievement of a pre-determined objective, but rather as a normal or regular function of the maintenance department that is to be continued indefinitely. This policy is an outgrowth of the company's experience that, because of changing conditions, buildings needed today may be eliminated tomorrow, and for this reason it feels that success in a campaign of this character can be achieved only by constant vigilance.

Hence, it is felt that inspections for the purpose of determining if certain buildings can be dispensed with must be made periodically and at as frequent intervals as two or three months.

To a considerable extent the Lackawanna's building elimination program has been aimed at the accumulations of buildings in yard and terminal districts. In such districts on this road, as on other lines, there are usually numerous buildings of a miscellaneous character that have in the course of time created what is termed on the Lackawanna a "railroad-yard village." Such structures vary from the familiar box-car office or locker room to small rough shelters of make-shift construction, and many of them, particularly in the latter classification, have been constructed of nondescript materials by local yard or enginehouse employees, or others. In many instances a stove is installed and the structure immediately becomes a fire hazard.

The experience of the Lackawanna has been that the inspection of such structures, involving consultation with their occupants, often reveals many reasons why the buildings should be continued in existence. In view of this attitude it is pointed out that a maintenance of way or engineering officer is often not in a position to dispute the reasons advanced by the yard or enginehouse employee and that, in the absence of support from an officer of the department involved, the elimination of surplus buildings cannot proceed at a satisfactory rate.

Heads of All Departments Consulted

For this reason the engineering department, in embarking on its building elimination program, first undertook to impress upon the various department heads the desirability of removing all unnecessary buildings. When this had been accomplished, the practice was inaugurated of having the inspections made by parties consisting of representatives of the maintenance of way, operating and mechanical departments. Under this arrangement, the inspection party usually consists of the superintendent, the division engineer, the roadmaster and the master mechanic.

The inspection is made on a systematic basis and, in the case of yards, it proceeds from one end to the other or up one side and down the other. Each building is made to justify its continued existence on the basis of necessity and final decisions are made on the ground. Frequently, in order to make possible the retirement of certain buildings, essential activities are transferred to nearby structures where surplus space is available. In other instances the inspection may reveal that the building serves no essential purpose and in that case retirement becomes a simple matter.

Other Aspects of Program

But, as explained previously, the problem of the "railroad-yard village" comprises only one phase of the Lackawanna's building elimination program. Numerous developments of a diversified character have made possible, or indeed have necessitated, the abandonment of buildings on a wholesale scale. The lengthening of track sections, made possible by the inauguration of track

patrol by motor car, has been accompanied by the abandonment of numerous section and tool houses; the installation of color-light signals and the substitution of electric for oil lighting in other signals have resulted in the lengthening of signal sections and the abandonment of signal tool houses; decreases in local passenger business and other changes in shipper demands have rendered inactive many passenger stations, freight houses and loading platforms; the advent of larger engine tenders has eliminated the necessity for maintaining water service facilities at many points; and numerous other changes of a miscellaneous character have had their effect on building usage.

All Types of Buildings Included

Thus the buildings that have been removed in the Lackawanna's building elimination campaign include structures embraced in nearly every phase of railway activity. Among the more important types that have been affected by the program may be included the following:

Station buildings	Storerooms
Tool houses	Frame garages
Oil houses	Bunk houses
Fire car houses	Carpenter shops
Cattle pens	Car inspectors buildings
Hose houses	Turntables
Crossing shanties	Track scales
Signal towers	Company dwelling houses
Shelter houses	Ice houses
Freight houses	Car repair buildings
Blacksmith shops	Mail cranes
Auto loading docks	Water tanks
Freight platforms and ramps	Lumber sheds
Power houses	Enginehouses
Coal houses	

Quite frequently it has been possible to retire passenger stations that were not being used to capacity by replacing them with section tool houses. In the case of small frame oil houses the double purpose of eliminating a fire hazard and of effecting maintenance economies has been served by removing the house and providing metal containers for the oil.

Sell Most Buildings

In few instances does the railroad company incur any expense in the removal of buildings that have been earmarked for retirement. The practice is to sell them, sometimes for their salvage value but more frequently for cash, and the majority have been sold at prices ranging from \$3 to \$200. After a building has been designated for removal the procedure is for the local representatives of the railroad to locate a buyer, which is ordinarily accomplished without difficulty or delay. As a matter of fact, quite frequently a number of bids are received.

When a buyer has been located, regardless of whether the structure is to be sold for cash or removed for the salvage materials, he is asked to execute in duplicate a formal letter contract containing a standard liability clause releasing the railroad from personal or property damages during the progress of the removal work. When this agreement has been executed, a standard "sales order," which is issued through the general purchasing agent, is sent to the roadmaster and constitutes his authority to release the building to the buyer.

After a building has been designated for retirement, the problem of effecting its removal is prosecuted actively to a satisfactory conclusion. Each roadmaster has a list of the buildings on his territory that have been

earmarked for removal and is required to submit to the chief engineer a weekly report of the buildings removed, which gives also the amount of the cash realized from each sale. The data from these reports are recorded in the chief engineer's office and checked against the sales orders issued by the general purchasing agent.

The program of eliminating buildings on the Lackawanna is being carried out under the general supervision of G. A. Phillips, chief engineer, to whom we are indebted for the information contained in this article.

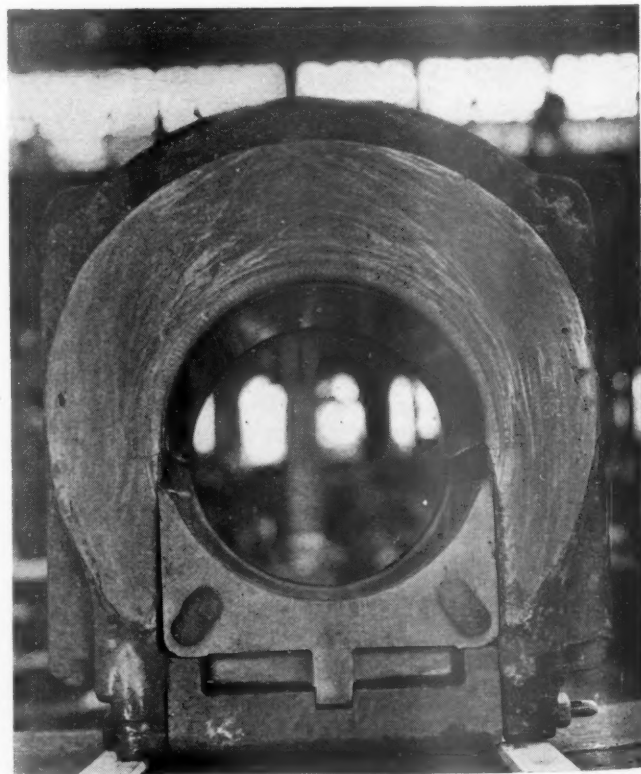
Locomotive Driving Journals Are Oil Lubricated

DESIGNED to minimize locomotive failures due to hot driving boxes, a system of oil lubrication for driving journals and hubs has been developed by the motive-power department of the Southern Pacific and installed on two 4-8-2 type locomotives, one of which, No. 4340, is shown in the illustration. Two other locomotives are now being equipped.

The new system substitutes oil for the conventional grease in driving boxes, eliminates hand lubrication of driving wheel hubs and minimizes the scoring of journals. Journal temperatures under operating conditions are reduced by more than 100 degrees.

The system, in part, comprises the use of spring-supported lubricating pads, heretofore used only in modern passenger car, engine and trailer trucks. The use of these spring lubricator pads on driving boxes entails only a minor modification of the conventional grease cellars to provide for an oil cellar from which oil is drawn up by wicking into a pad in constant wiping contact with the journal.

Supplementing the spring pads in the new driving-box



Felt Pads on the Oil Cellar Lubricate the Hub — Coil Spring Mountings on the Latches Permit Free Lateral Motion on Driving-Box Spacers When the Wheel Hubs Come in Contact with the Pads

lubricating system, as a further guarantee against lubrication failure, oil from the locomotive's mechanical lubricator is constantly fed through tubes into the crown bearings.

To improve the lubrication and wearing properties of the brass crown bearings, a serrated recess in each brass is filled with white metal as a bearing surface. This white metal has the characteristic of maintaining an even distribution of oil over its surface, and it is soft enough so that the scoring of journals is substantially minimized should the bearings become overheated for any reason.

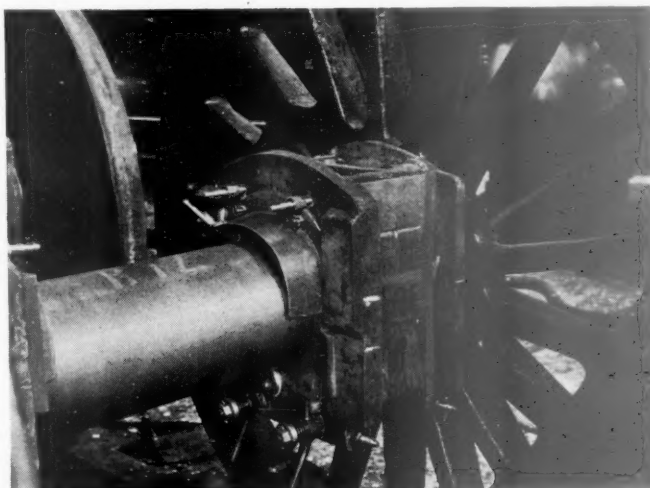
Tests of locomotives equipped with the improved oil-lubricating system are said to show remarkably low journal temperatures under all operating conditions. Pyrocon readings on the surface of the journals have indicated temperatures, as low as 70 deg. F. and only as high as 130 deg. F. Under the same conditions conventional brass crown bearings, grease lubricated, are said to average between 200 and 350 deg. F.

The system also provides positive automatic lubrication of driver hubs by means of two hard felt pads inserted in slots at the rear of the oil cellar. These pads

when the wheel hubs come in contact with the felt pads due to lateral motion.

The cellars are easily withdrawn without removing cellar bolts as was previously necessary.

Heretofore it required one man about 80 minutes to repack the conventional grease cellars in eight driving



Driving-Box Oil-Cellar Assembly with Water Guard in Place

boxes of a mountain-type locomotive, whereas filling the eight oil cellars may be accomplished in ten minutes with consequent reduction in the cost of lubrication, both labor and material. A glass bull's eye sight on the cellar shows the exact oil level.

The two Southern Pacific locomotives on which the new system has been installed are now 100 per cent oil lubricated. Trailer- and tender-truck journals are lubricated by spring-pad lubricators, and driving boxes and engine journals are lubricated by spring pad lubricators and the mechanical lubricator. The mechanical lubricator also provides lubrication for driving-box shoes and wedges.

The cost of lubricant for all journals, hubs, shoes and wedges on each of these locomotives is said to be only about \$1.75 per 1,000 locomotive miles.



Driving Box Spring Pad Lubricator — The Wicking Draws Up Oil from the Cellar to Saturate the Pad, Which Is Held by Spring Tension in Constant Contact with the Journal

project $\frac{1}{8}$ in. beyond the babbitted face of the box and at their inner ends are fed with oil from the cellar through small holes.

Cellars are held in place by latches fitted with coil springs to permit free endwise movement of the cellars



Locomotive 4340, One of Two Southern Pacific Locomotives Now Equipped with Oil Lubrication Throughout

Railroads Big Factor in Royal Tour

The royal progress of Their Majesties through Canada and U. S. planned and executed largely by railroad staff

RAILROADS and railroad men of Canada and the United States are in a great measure responsible for the smooth performance of the meticulously planned tour of the reigning King and Queen of the British Empire in their triumphal progress through North America. Almost all of the point to point itinerary within the two countries has been routed by rail with the exception of a few boat trips, and even here in the case of the Vancouver (B. C.)—Victoria tour the royal pair sailed in craft operated by the Canadian Pacific and Canadian National, respectively. What is more, Their Majesties made their transatlantic voyage from Portsmouth, England, to Quebec, Que., in the Canadian Pacific Steamship "Empress of Australia" and put up at hotels owned by the two companies at various points in their trans-Canada progress.

In all the royal train will have travelled over 7,500 miles of Canadian roads before the monarch and his consort embark for home at Halifax, N. S., about June 15. Of this, the C. N. R. will have operated about 4,200 miles, and the C. P. R. the remainder.

Dipping Down Into the U. S. A.

Details of the United States portion of the tour could not be published when this issue of *Railway Age* went to press, due to a strict policy of secrecy imposed on the carriers by the bureaucrats in the State Department at Washington. It is known that the royal pair were scheduled to arrive at the Niagara border via the C. N. R. at about 8 p. m., June 7, and be welcomed by an official committee at Suspension Bridge station. After a brief ceremony, the royal train and a pilot train carrying the welcoming committee, the press, and others were to proceed over the Pennsylvania to Washington, D. C., where they were due to arrive at 11 a. m. on June 8. Further plans called for a trip to New York, via railroad to Red Bank, N. J., whence the party would board a vessel for a short sail across the bay to the metropolis itself.

After a visit with President Roosevelt at his Hyde

Park (N. Y.) estate, the British monarchs, on the evening of Sunday, June 11, will board their train on the New York Central's Hudson division and journey to the border at Rouses Point, N. Y., via the Central to Troy, N. Y., and the Delaware & Hudson beyond.

Re-entering Canada, the Royal train will proceed over the Napierville Junction to Delson, Que., and the Canadian Pacific to Sherbrooke, Que.

Equipment of the Royal Train

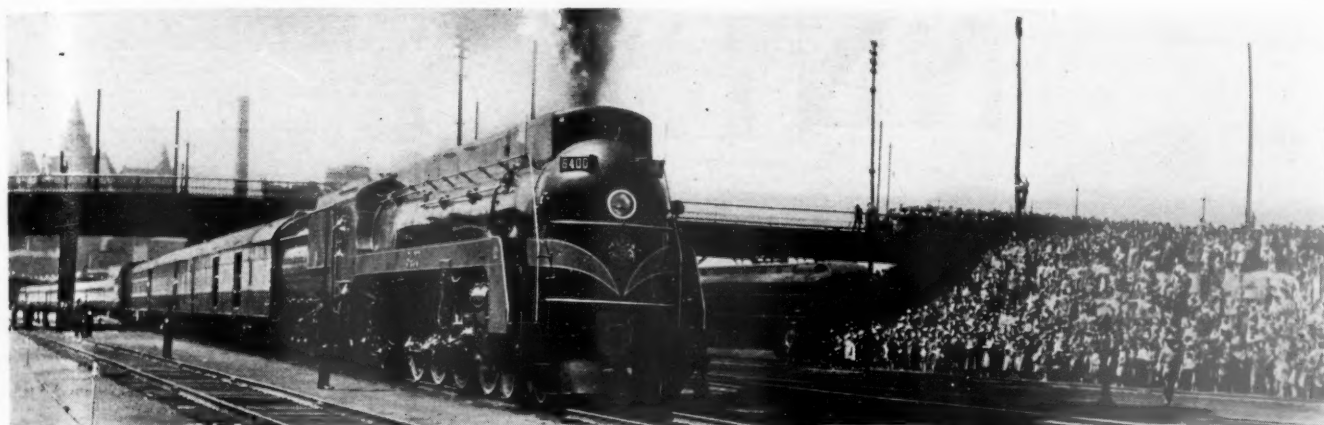
A railroad train is not only the means of transporting the royal party on their extensive tour but serving as their living quarters and reception headquarters as well. Hence the carriers have outdone themselves to furnish equipment that is not only "fit for a king" in point of luxury and comfort but as well roomy and efficient for the use of the large staff required on the tour.

The royal train proper consists of 12 cars, of which 6 each are furnished by the C. P. R. and C. N. R., respectively. While none of the cars has been specially built for service in the royal train and all equipment will be returned to regular service after release from special duty, the entire train has been entirely redecorated and refurbished for the tour service. Exterior color scheme is royal blue and silver. The C. N. R. cars have silver panels between the windows and a horizontal gold stripe above and below the windows, the blue color extending above the windows to the roof line. The C. P. R. cars are decorated with a broad band running the length of the car for the height of the windows consisting of aluminum leaf laid in diagonal squares, the marginal edges being defined with gold stripes. Each of the two cars accommodating Their Majesties bear the royal coat-of-arms in the center below the windows, while the remaining units all bear the royal cipher-and-crown in the same location, and, in addition, the royal crown at each end of the letter board immediately under the roof line. The roofs are uniform in appearance and finished in metallic lacquer, gun metal shade.

The cars of the royal train, numbered in order from



This Canadian Pacific Locomotive Was Especially Decorated to Haul the Royal Train on a 3,000-Mile Trip Across the Continent to Vancouver



Courtesy Canadian National

Canadian National Locomotive No. 6400 Departs from Ottawa With the Royal Train

the rear of the train to the locomotive, follow with brief descriptions:

(1) C. N. R. Regularly Governor-General's private car. Contains bedrooms, dressing rooms and private baths of King and Queen, respectively; sitting room for the royal couple panelled in golden birch, ivory ceiling; and bedrooms for the maid and Lady-In-Waiting, respectively.

(2) C. N. R. Regularly Governor-General's private car. Contains large sitting room painted in Nile green; office panelled in oak; dining room seating 12 and kitchen.

(3) C. P. R. "chambrette" car. In regular service contains 14 single bedrooms with toilet facilities. One bedroom has been converted into a complete bathroom and other rooms combined as a wardrobe chamber complete with ironing board.

(4) C. N. R. "Pacific." Lounge and compartment car redecorated for accommodation of Ladies-in-Waiting and other members of the staff. Lounge chairs upholstered half in dull green and half in light greyish red. Four compartments fitted with light drapes and upper berths removed. One compartment converted to a bathroom.

(5) C. P. R. business car "Wentworth." Open rear platform enclosed. Otherwise unchanged.

(6) C. N. R. "Atlantic." Same as (4), except for inclusion of special wardrobe room, and shower instead of complete bath.

(7) C. N. R. business car No. 99. Travel headquarters of Lord-in-Waiting and Lord Chamberlain. Contains two bedrooms, lounge, dining room, kitchen, wardrobe room and servants' bedroom.

(8) C. P. R. "chambrette" car. Same as (3) except that one room has been fitted as a business office.

(9) C. P. R. "Viceroy" combination car with 4 double bedrooms and 8 standard sections. Smoking room converted into complete barber shop.

(10) C. N. R. diner seating 40. End walls decorated with murals of Canadian wild life executed in wood inlay panels.

(11) C. P. R. combination sleeping and baggage car. Six berths for dining car crew. Baggage section fitted with refrigerators, clothing space and telephone switchboard.

(12) C. P. R. end-door baggage car. Contains electric generating unit consisting of a vertical-compound steam engine supplied by locomotive. Generator operates at 70 to 75 volts and is used to supplement car generators. Also baggage space for accessories, including spare parts for train equipment.

The Royal train is being preceded throughout the tour

by a 12-car pilot train including sleepers and baggage cars which convey representatives of the press, railroad and police officers and excess baggage of the royal train. Included in its equipment is a dark room for photographers and a postal service section. The C. N. R. supplied 7 of the cars and the C. P. R. the remainder.

The two trains will be hauled over C. N. R. lines by four locomotives—one 6400 class, two 6000 class and one "Pacific" type, all specially decorated for the tour in royal blue and aluminum and bearing a large royal coat-of-arms on the sides of the tender and a smaller one in the form of a plaque on the front of the locomotive.

The C. P. R. has re-decorated locomotive No. 2850 for the tour, one of 40 of the 4-6-4 type built in the past two years. Its stainless steel sides are painted in royal blue, silver and gold, while the semi-streamlined front bears the royal arms over the sunken headlight. Imperial crowns decorate each running board, while the crest of the road appears beneath the window of the cab and on the tender. This locomotive hauled the royal train over 3,000 miles from Quebec, Que., to Vancouver, B. C.



View of One End of the King's Sitting Room on the Royal Train

NEWS

Crossing Mishaps Lower in 1938

Fewer deaths and injuries are reported than in any year since 1933

The smallest number of casualties since 1933—1,517 deaths and 4,018 injuries—resulted from 1938 rail-highway grade crossing accidents, according to the summary statement for last year recently issued by the Interstate Commerce Commission's Bureau of Statistics. This relatively favorable showing follows upon the worst record since 1930 which was set up in 1937 with its 1,875 deaths and 5,136 injuries.

The 1938 casualties at grade crossings constituted 33.37 per cent of the fatalities and 25.92 per cent of the non-fatal injuries reported in connection with all of last year's railway accidents associated with train operation; also, they represented 4.1 per cent of all 1938 deaths from motor vehicle accidents. The percentage reduction in crossing fatalities in 1938 as compared with 1937 (19.09 per cent), the Bureau points out, corresponds with that in motor vehicle experience generally, in which connection it is estimated that there were 32,000 motor vehicle deaths in 1938, a decrease of 19.28 per cent under 1937.

There was a decrease in 1938 as compared with 1937 in the number of cases where motor vehicles ran into the side of trains; last year 35.29 per cent of the train-motor vehicle collisions were thus caused as compared with 37.47 per cent in 1937. In calling attention to tables showing decreases in the number of accidents in each of the principal "causes" the Bureau cites a "notable exception" in the item "trains striking or being struck by motor buses." Thirty-four persons were killed and 73 injured in such accidents in 1938 as compared with one death and 42 injuries in 1937. Three accidents in which school buses were involved accounted for 27 of 1938's 34 deaths in that connection.

Relating the grade crossing accidents to the number of train miles and the number of automobile registrations, the Bureau calculates that the 1938 rate was 4.28 accidents per million train-miles and 118.5 accidents per million automobile registrations; the comparable 1937 figures were 4.89 per million train-miles and 151.1 per million automobile registrations. These index numbers are qualified with the suggestion that registrations do not accurately measure the number of motor vehicles which cross railroad tracks.

A greater proportion of the 1938 crossing accidents occurred in daylight than in 1937—53.06 per cent as compared with 51.47 per cent. The hour of greatest frequency was between 5 and 6 p. m.; in 1937 it was between 7 and 8 p. m. Saturday was the day of greatest frequency, as it was in the previous year as well as in 1935 and 1936. Winter is the season of highest frequency; in 1938, 35.58 per cent of the crossing accidents occurred in November, December and January, with a peak in December.

One of the tables shows motor trucks were involved in 20.82 per cent of 1938's crossing accidents, as compared with 22.03 per cent in 1937; passenger automobiles figured in 78.18 per cent as compared with 77.13 per cent in the previous year. Freight trains were involved in 45.19 per cent of the 1938 train-motor vehicle collisions and passenger trains in 43.19 per cent. Thirty-three per cent of the accidents involving motor vehicles occurred at crossings protected by lowered gates, watchmen, trainmen, or audible or visible signals which indicated the approach of trains. "The significance of this percentage," the Bureau points out, "cannot be appraised without a record of the proportion of traffic using these crossings."

A little over 24 per cent of the night accidents occurred at crossings at which lights had been especially installed to illuminate the crossing. Sixty per cent of the accidents involving freight trains occurred at train speeds of less than 20 m.p.h.; while in 34 per cent of the accidents involving passenger trains the train speeds ranged from 10 to 29 m.p.h. In approximately 60 per cent of the accidents the motor vehicle involved was reported standing or running at less than 30 m.p.h. No "unusual railroad operating conditions" prevailed in 82 per cent of the accidents, but seven per cent occurred at crossings where an ordinance prohibited the use of the locomotive whistle. The condition of the highway was said not to be a contributing factor in 93 per cent of the crossing accidents.

Virginia Roads Ask I. C. C. Rate Order

The Southern, the Norfolk & Western and the Clinchfield have asked the Interstate Commerce Commission to institute an investigation and issue an order forcing the State Corporation Commission of Virginia to increase intrastate rates on coal to the level of interstate rates as set by the I. C. C. in Ex Parte 115. The petition alleges that the intrastate rates are now lower than interstate rates and are unfair and constitute a burden on interstate traffic.

Federal Barge Line "Prospered" in '38

Ashburn reports on year which brought peak traffic and "net income"

The government-owned Inland Waterways Corporation reported for 1938 "net income" of \$1,105,449, greater than that of any other year in the history of the Corporation, according to President T. Q. Ashburn's annual report to the Secretary of War. The 1937 "net income" was \$253,935.

General Ashburn's analysis of the 1938 operations further shows that last year was also one of peak traffic; while Secretary-Treasurer Guy Bartley called attention to a finding of the Corporation's comptroller who reported that "the direct saving to the public on traffic handled by the Federal Barge Lines during 1938 amounted to \$2,500,000." The total "savings" from June 1, 1924, to December 31, 1938, are put at \$30,912,000 by Mr. Bartley, who explains that "this is the difference between charges paid on traffic routed via Federal Barge Lines and what the charges would have been if the traffic had moved all rail."

This will be the general's last report to the Secretary of War, since I. W. C. becomes an agency of the Department of Commerce on July 1 under one of the government reorganization plans recently submitted to Congress by President Roosevelt. The general retired from the Army within the past year, but has since continued as president and chairman of I. W. C. and its subsidiaries.

After noting how 1938 turned out to be the peak income and traffic year, General Ashburn invited "particular attention" to the fact that such figures "represent actual transactions and results as they appear when rendered in accordance with Interstate Commerce Commission regulations, and do not include expenses which might have been borne if the Corporation had been privately owned and operated." The additional expenses which the Corporation would have had to pay if privately owned are estimated for 1938 by Secretary-Treasurer Bartley at \$70,580.

"However," the general adds, "additional expenses incurred by this Corporation through its joint rate and operating expenses on losing sections far exceeded the expenses it saved because of its governmental ownership. The Corporation is compelled to operate on certain rivers whether or not such operation be successful."

(Continued on page 1002)

Land-Grant Bills Get Senate Hearing

Bureaucrats spring new idea
of conditioning repeal on
return of lands

Representatives of government departments injected a new note into the land-grant rate situation when they suggested at this week's hearings on bills now before the Senate committee on interstate commerce that any repeal of the land-grant rates should be conditioned upon a return to the government of granted lands remaining in the hands of railroads and the relinquishment of railroad claims for land now in litigation. These government witnesses generally defined their roles before the sub-committee headed by Senator Truman, Democrat of Missouri, as those of fact presenters and suggesters of "equitable" arrangements so that Congress might better understand what it was doing if it should decide to repeal the land-grant rates—a matter with respect to which the departmental witnesses took no position.

The railroad presentation in favor of repeal was directed by J. M. Souby, assistant general counsel of the Association of American Railroads, who had not previously heard of the return-the-remaining-lands angle, and thus he had no idea as to what would be the attitude of the two or three individual roads that might be affected. He suggested, however, that the general proposition which had an "equitable" look is nevertheless quite inequitable in that it would lay the burden of meeting the condition on the two or three roads which happen "by accident" to have some of the granted lands still in their possession.

The railroad witnesses were: Dr. C. S. Duncan, economist of the Association of American Railroads; R. N. Nash, assistant to vice-president, A. A. R. Traffic Department; and J. Elmer Monroe, statistician of the Bureau of Railway Economics. Repeal was also urged by John B. Keeler, chairman of the legislative committee of the National Industrial Traffic League; and John T. Corbett, assistant grand chief and national legislative representative of the Brotherhood of Locomotive Engineers. Assigned for the hearing were three Senate bills relating to land-grant rates—S. 1915 and S. 1990, repealers introduced respectively by Senator Reed, Republican of Kansas, and Senator Truman, and S. 2294, the bill introduced by Senator Sheppard, Democrat of Texas, to provide for a survey of the land-grant situation by the General Land Office of the Department of the Interior.

The first witness was Benjamin C. Marsh, executive secretary of the Peoples Lobby, Inc., who called upon the committee to reject the repealers as part of the policy to aid the railroads by "pyramiding plunder upon posterity." Mr. Marsh hoped for a favorable report on S. 2294.

J. W. Wolfsohn, assistant to the commissioner of the General Land Office, said that his department had prepared reports,

which had not been cleared through the Bureau of the Budget, opposing repeal of the land grants on the grounds that such action would bring increased costs to the government. The department, he went on, takes no position as to the general railroad situation, adding the suggestion that if the committee decides to recommend repeal it would be "equitable" to call for a return of the lands remaining in the hands of the railroads. It was later brought out through subsequent witnesses that the original grants amounted to 132,352,000 acres, which was cut by readjustments to about 130,000,000 acres. There are approximately 12,000,000 remaining in the hands of the railroads or in controversy, 9,000,000 of the 12,000,000 being in the latter category.

Walter E. Kelly, assistant to the solicitor of the Post Office Department, said that department merely wanted to present some "facts" with respect to the cost of repeal to the government. He went on to estimate that the additional cost of mail transportation would be \$2,400,000 a year. Also, Mr. Kelley pointed out that one of the bills before the sub-committee made no provision for the transportation of railway mail clerks; and he estimated that the department would encounter an additional annual cost of \$20,000,000 if it had to pay for the transportation of its traveling employees. Senator Truman pointed out that the existing law in that connection was in S. 2009, the recodified Interstate Commerce Act, as it passed the Senate, adding that it would also be incorporated in any land-grant-rate repealer approved by the committee. The witness was unable to tell the chairman anything about mail subsidies to steamship and air lines.

Conditioning of repeal on return of the lands was also urged by L. F. Kneipp, assistant chief of the Agricultural Department's Forest Service; while E. E. Danly, special assistant to the Attorney General, said the Department of Justice thought repeal should be conditioned upon the railroads' relinquishing claims to land in litigation—it takes no position with respect to the return of remaining land held clear by the carriers. W. E. Hayghe of the Treasury Department's Procurement Division had no comment to make on the merits of the bills; he merely asked that, if repeal is decided upon, the effective date be sufficiently remote to permit the execution of outstanding government purchase contracts.

Dr. Duncan pointed out how the land-grant mileage is to a considerable extent concentrated in the West and South where the needs of the railroads are greatest. He later asserted, however, that equalization agreements have extended the land-grant rates throughout the country, making for a demoralizing factor in the rate structure. Touching upon the history of the land grants he told how the railroads, thus aided, opened up the country, and quoted from debates and speeches of the time to emphasize his point that when the lands were being given away those giving them said they were worthless without the railroads. Dr. Duncan thinks that the only reasonable basis of valuing the lands granted is to take the value at the time of the grant, and in his judgment they have been

(Continued on page 1003)

House Committee Airs Court Bill

Members of judiciary group
show great interest in
revamping measure

Hearings before the House judiciary committee on S. 1869, the Wheeler-Truman railroad reorganization court bill recently passed by the Senate and on H. R. 6369, a companion bill introduced by Representative McLaughlin, Democrat of Nebraska, were begun on May 31 and continued through June 7. It appeared that the hearings would continue for another week at least due to the large number of witnesses and the extensive record that is being built up. Witnesses appearing so far have been Interstate Commerce Commissioner Splawn; Max Lowenthal, counsel to the Wheeler rail finance investigating committee; Samuel H. Cady, vice-president and general counsel for the Chicago & North Western; and Robert E. Coulson, counsel for the A. C. James Company, a large stockholder in the Western pacific. Many more questions are being asked the witnesses by the House committee than were asked by the Senate committee with the result that the bill is being gone into in much more detail than it was on the other side of the Capitol.

The committee is being presided over by Congressman Chandler, Democrat of Tennessee, and author of the recently-passed Chandler voluntary railroad reorganization measure. Members of the committee appear quite interested in the bill but are non-committal as to the prospects of its getting out of committee. Chairman Chandler evinces a large amount of interest but has repeatedly said that his mind is not made up as to whether or not he will vote for it. Certainly, it will not receive the speedy handling that it received on the Senate side.

As pointed out in last week's issue both Dr. Splawn and Mr. Lowenthal followed generally the lines of their testimony before the Senate committee. Dr. Splawn cited the financial condition of the industry and urged the adoption of the bill to facilitate the reorganization of those roads now in either receivership or trusteeship. Mr. Lowenthal explained the measure in detail, pointing out its features and urging its adoption.

Representative Michener, Republican of Michigan asked Dr. Splawn at one point in his testimony if there was any danger in setting up a court with a definite philosophy. Dr. Splawn did not think that the bill provided for any definite philosophy on the part of the court. He went on to say that the reorganization court would be no different than any other court. Representative Chandler asked why railroad reorganizations "have bogged down." Commissioner Splawn did not blame either the commission or the courts for this, but he felt that the commission should be relieved of the judicial work that it is now doing and that a special court could do the work better.

At another point in Dr. Splawn's testi-

mony, Chairman Chandler observed that no one of the committee-of-six represented any railroad in trusteeship. In view of the fact that the measure was recommended by the committee-of-six, he thought that the recommendation would have carried more weight had some bankrupt road been represented.

Representative Hobbs, Democrat of Alabama, told the committee that he believed that placing all rail reorganization cases on one docket would make an "almost Herculean task" for the new court. Rather, he would favor letting the Chief Justice of the United States Supreme Court assign other Circuit Court of Appeals justices to the court whenever its docket becomes congested.

Mr. Cady appeared in opposition to the bill, telling the committee that there was "no real need for the creation of a new court." He also objected to the fact that the bill provides no limit for the number of assistants that the court may appoint. He thought that the measure would retard rather than speed up reorganizations.

Departing slightly from the subject under discussion, Mr. Cady told the committee that the railroad industry was plagued in recent years because it had been under the domination of organized labor. He went on to say that "feather-bed rules must be revised" and a change made in the Railway Labor Act if the industry is to survive.

Mr. Lowenthal analyzed the bill for the committee and answered many questions from committee members as to its actual operation. He explained that the authors of the bill, Senators Wheeler and Truman, had given him carte blanche to say whatever he pleased as to the merits of the bill as passed by the Senate. The bill as passed by the Senate provides for five judges, but Mr. Lowenthal said that he would prefer three because they would be more efficient.

The bill also provides that the court may delegate part of its authority to a district judge so that the latter may handle the details of the actual operation of a road instead of the trustees having to come to Washington every time a decision has to be made. Representative Barnes, Democrat of Illinois, wanted to know whether a constitutional question was involved in the delegation of judicial authority from one court to another. Mr. Lowenthal did not think that there was any constitutional question involved.

At another point in the discussion Representative Hobbs asked the witness whether he would object to making an appeal from the court a right rather than a privilege. Mr. Lowenthal answered by saying that in the case of small questions the appeal should be by privilege or by a writ of certiorari as provided in the bill but that in cases of greater moment it might be preferable to give an absolute right of appeal to the Supreme Court.

The next witness was Mr. Coulson who raised certain objections to the bill. In the first place, he wondered whether the centralization of power in a central court in Washington would not be unpopular "back home" with the congressmen's constituents. He went further to suggest that railroad labor and the shipping public

I. C. C. Suspends Trainload Rate Tariff

The Interstate Commerce Commission this week suspended from June 7 until January 7, 1940, the trainload-rate tariff whereby the Illinois Central and Missouri Pacific hoped to meet water competition for blackstrap molasses moving from New Orleans, La., to Peoria, Ill., and Pekin. As pointed out in the *Railway Age* of May 20, page 882, the carriers proposed to publish for application between those points a rate of 14 cents per 100 lb. on blackstrap shipped in tank cars in minimum quantities of 1,800 net tons—a minimum which was translated by protestants into 40 tank car loads.

The I. C. C. has docketed the case as Investigation and Suspension Docket No. 4645, but did not set a date for the hearing announced in the suspension order.

might not be so keen on having this power centralized in the Capital City.

Turning to certain features of the bill, he objected to the 12-year measure set up as the standard for recapitalizations and told the committee that he did not see how one could rebut a presumption as to the future earnings of a railroad. The bill as passed by the Senate provides that it shall be a rebuttable presumption that the fixed charges of the new capitalization shall not exceed the average earnings for the past 12 years. Representative McLaughlin asked whether the 12-year presumption should not be rebuttable by expert testimony. Mr. Coulson agreed that expert testimony as to a road's prospective earnings would be all that could be introduced as evidence. Mr. Coulson concluded his testimony by asking the committee to consider whether or not section 77 has had a fair chance and whether it might not be better to let it work out a little longer before any amendments are added to it. He admitted that democratic processes are slow but added that such must necessarily be the case.

The witnesses at the June 7 meeting of the committee were W. R. C. Cocke, general counsel for the Seaboard Air Line, and Fairman R. Dick, a member of the New York financial house of Dick & Merle-Smith, who appeared on behalf of the Transportation Association of America. Both men opposed the measure as it is now drafted and their testimony was very similar to that which they gave before the Senate interstate commerce committee.

Mr. Cocke told the committee that he believed a central court of five judges cannot function with the efficiency which its sponsors attribute to it. He also objected to those provisions of the bill which would, he said, make it impossible for a district judge to know whether there was any finality to his orders or whether they would be appealed to the reorganization court. He also believed that the volume of litigation would be so large that the court would be unable to handle it.

Turning to the valuation concept of the

measure, Mr. Cocke said he believed other elements of value other than the average earnings for the past 12 years should be taken into consideration in determining the capitalization of the new company. He concluded by asking the committee to leave the law as it now is.

Mr. Dick read into the record a lengthy analysis of railroad credit pointing out that unless railroad earnings begin to increase, it is futile to try to reorganize those roads now in trusteeship. Mr. Dick told the committee that the six-year standard of average earnings would cause a reduction of 68 per cent in the capitalization of all the country's railroads based on the commission's physical valuation.

The witness suggested that the committee include in the measure an amendment which would set the value of each share of new stock to be issued in a reorganized company at \$100. At the conclusion of Mr. Dick's statement, Chairman Chandler observed that the committee's problem was an exceedingly difficult one because of the fact that there are so many viewpoints which differ so widely.

Hearings will continue on June 12, and it appears at this time that they may easily continue through the better part of this month as the committee seems very desirous of hearing everyone who wants to testify.

Status of R. F. C. Rail Loans

The monthly financial statement of the Reconstruction Finance Corporation as of April 30, shows loans to railroads (including receivers) of \$638,135,661 and repayments of \$194,295,993.

Frisco Would Buy Bus Line

The Frisco Transportation Company, affiliate of the St. Louis-San Francisco has applied to the Interstate Commerce Commission for authority to purchase the Victory Transit Line, which operates bus service between Joplin, Mo., and Monett.

Club Meetings

The Toledo Transportation Club will hold its annual golf party at the Inverness Country Club, Toledo, Ohio, on June 22.

The 20th annual outing of the Transportation Club of the Rochester (N. Y.) Chamber of Commerce will be held on June 15 at Manitou Beach on Lake Ontario.

"Golden State" Speeded Up

The Golden State Limited, operated by the Chicago, Rock Island & Pacific and the Southern Pacific between Chicago and Los Angeles, will be speeded up 1 hr. 5 min. or to 59 hr. 10 min., effective June 10. The train will leave Chicago at 10:15 a. m., as at present, and will arrive in Los Angeles at 7:25 p. m. the third day, instead of 8:30 p. m. as at present.

Hiawatha Serves as Broadcasting Station

The Hiawatha of the Chicago, Milwaukee, St. Paul & Pacific, was used as a broadcasting station by Station WTMJ of Milwaukee on May 19, under the sponsorship of the Meier Ice Cream Company.

The program was headed by Nancy Grey, travel commentator, who was assisted by the train's engineer, conductor and chef.

I. C. C. Authorizes Burlington Purchase

Division 5 of the Interstate Commerce Commission has authorized the purchase by the Black Hills Stages, Inc., of certain operating rights and property of the Black Hills Transportation Company, and acquisition by the Burlington Transportation Company of joint control of the Black Hills Stages, Inc. The Burlington company is a wholly-owned motor carrier subsidiary of the Chicago, Burlington & Quincy.

Auto-Rate Hearing Postponed

The Interstate Commerce Commission has postponed to a date to be fixed later the hearings scheduled to open June 13 in Detroit, Mich., in connection with the investigation of rail, motor, and water rates on new automobiles now being conducted by the commission in cooperation with the United States Maritime Commission. Meanwhile the commission has denied the petition of transcontinental and Pacific slope rail lines for exemption from this proceeding.

U. S. Supreme Court Decides in Favor of M. O. P.

The United States Supreme Court at its final session of the present term on June 5, in the case of Baldwin, et al. v. Scott County Milling Company reversed a decision of the Supreme Court of Missouri and held that a railroad may recover amounts paid a shipper under a reparation order of the Interstate Commerce Commission upon a finding that rates charged were unreasonable, where the commission later set the award aside. The case involved reparations paid to the Scott Milling Company by the Missouri Pacific.

Chicago Hearing in Stock Yards Case Set for July 12

Further hearing in connection with the Interstate Commerce Commission's Ex Parte No. 127 investigation of the status of public stockyard companies has been set for July 12 at the Hotel Sherman, Chicago. Commissioner Splawn and Examiners Carter and Haden will be on the bench.

Evidence will be received with respect to the Cincinnati Union Stock Yard Company; Cleveland Union Stock Yards Company; Detroit Stock Yards; Bourbon Stock Yards Company, Louisville, Ky.; St. Louis National Stock Yards, National Stock Yards, Ill.

I. C. C. Report on S.2009

Interstate Commerce Commissioner Eastman, in his capacity as chairman of the commission's legislative committee, on May 27, submitted to Chairman Wheeler of the Senate committee on interstate commerce a memorandum of suggested amendments to S.2009 in the form in which it was reported to the Senate, it was learned this week. Mr. Eastman expressed regret that the commission had been unable to transmit the suggestions prior to passage of

the bill by the Senate, adding that a copy was being sent to the House committee on interstate and foreign commerce.

The 25-page Eastman memorandum is a series of section by section suggestions for changes in language or other alterations, with their relative importance appraised in each case by the words "Necessary" or "Desirable" or "Debatable."

Beyer Heads Mediation Board; Lewis Confirmed by Senate

Otto S. Beyer, member of the National Mediation Board, has been designated by the Board as acting chairman for the term ending June 30 and as chairman for the fiscal year beginning July 1. Mr. Beyer succeeds former Chairman William M. Leiserson who left the Mediation Board on May 31 to take up his new duties as a member of the National Labor Relations Board.

As pointed out in the *Railway Age* of May 27, former Representative David J. Lewis of Maryland has been appointed by President Roosevelt to serve out Dr. Leiserson's unexpired N. M. B. term. Mr. Lewis' appointment was confirmed by the Senate on June 1.

"Hiawatha" Has "Guest Conductor" from "Zephyr"

When the "Hiawatha" of the Chicago, Milwaukee, St. Paul & Pacific, celebrated its fourth birthday on May 29, Lloyd W. Mathers, a conductor on one of the "Twin Zephyrs" of the Chicago, Burlington & Quincy, was the guest of Ernest C. Haddock, the conductor on the Hiawatha. The celebration of the anniversary began before train time when Mr. Mathers and several officers of the Burlington were guests at a luncheon in a dining car of the Hiawatha. After the party, the Zephyr conductor rode the Hiawatha.

Since May 29, 1935, when the Hiawatha was placed in service, it has carried 1,185,000 paying passengers, an average of more than 800 daily, not including the passengers that have traveled on the morning Hiawatha which went into service last January. Last year the Hiawatha netted the Milwaukee \$2.68 a train mile, with gross

earnings of \$4.15 a train mile and operating costs, including interest, depreciation and maintenance of equipment totaling \$1.47 a train mile. In 1937 net revenue was \$2.63 a train mile; in 1936, \$2.46 and for the seven months the train was in service in 1935 it was \$2.18.

Senate Takes the Fifty Million Dollars for Waterways

Rejecting amendments whereby its committee on appropriations sought to hold rivers and harbors funds for the fiscal year ending June 30, 1940, to the budget estimate, the Senate on June 1 passed the War Department civil functions appropriation bill (H.R.6260) with rivers and harbors money in the amount of \$96,000,000.

The Senate thus followed the lead of the House in acting to exact payment in advance on Presidential assurances that \$50,000,000 of the amount to be appropriated for fiscal 1940's work relief program would be allocated to rivers and harbors and flood control work—\$25,000,000 to each. As pointed out in last week's issue the Senate committee reported the bill with committee amendments proposing to eliminate this \$50,000,000. Maneuvers of the House and its committee on appropriations in the same connection were reported in the *Railway Age* of May 20, page 880. The bill went from the Senate to conference as the upper body made some changes in other appropriations carried in the measure as passed by the House.

St. Louis Traffic Club Elects Officers

The following officers were elected for the ensuing year at the annual meeting of the Traffic Club of St. Louis on June 1: President, Frank Mullivan, vice-president of the Crunden-Martin Manufacturing Company; vice-presidents, C. B. Sudborough, southwestern freight traffic manager of the Pennsylvania; Edward F. Ledwidge, general traffic manager of the Granite City Steel Company; H. L. Hamill, general agent of the Chicago & North Western; Walter A. Vahle, traffic manager of the Monsanto Chemical Company; and Joe H. Williams, general agent of the Decatur Cartage Company; secretary, C.



Ernest E. Haddock, Left, Hiawatha Conductor, Yielded the Punch to His Guest, Lloyd W. Mathers, Zephyr Conductor

S. J. Flood, assistant traffic manager of Anheuser-Busch, Inc., and treasurer, George W. Neudling, general agent of the Kansas, Oklahoma & Gulf and the Midland Valley.

Hearing on Record-Keeping for "Red Caps"

A hearing on possible additional records regulations concerning employment of "Red Caps," or hand-baggage porters, has been scheduled for June 27 by Administrator Elmer F. Andrews, of the Wage and Hour Division, United States Department of Labor. The hearing will be held in Washington, D. C., before Gustav Peck, assistant chief of the Hearings and Exemptions Section of the Division.

The question on which evidence and argument will be submitted at the hearing is: "What, if any, amendments should be made to Part 516 of the Regulations issued by the Administrator under Section 11 (c) of the Fair Labor Standards Act of 1938, to require special or additional records to be kept by employers of Red Caps, or hand-baggage porters?"

May Employment Statistics

With drops in all other classes offset by the 11.16 per cent rise in the maintenance of way and structures group, total railroad employment increased 0.78 per cent—from 950,130 to 957,580—during the one-month period from mid-April to mid-May, according to the Interstate Commerce Commission's compilation based on preliminary reports. The May index number, based on the 1923-1925 average as 100 and adjusted for seasonal variation, was down from April's 53.6 to 53, better than May, 1938's 50.1 but lower than that for any month since last September.

The May employment was 5.74 per cent above that of May, 1938, the largest increases over last year being in the maintenance of way and structures (14.71 per cent) and the maintenance of equipment and stores (8.83 per cent) groups. The largest decrease in May as compared with the previous month was in the maintenance of equipment and stores group which was down 3.65 per cent.

Retirement Board Rulings

The Lenoir Car Works and the Southern Pacific Building Company, subsidiaries of the Southern Pacific, are "employers" within the meaning of the Railroad Retirement Act, according to recent Railroad Retirement Board decisions noted in the latest number of the Weekly Review issued by the Board's Bureau of Economics. Noted also is a recent ruling on the status of trucking companies, holding that credit for service to any company engaged exclusively in trucking operations will not under present circumstances be allowed under the Railroad Retirement Act, regardless of the nature of the trucking operations involved.

In the latter connection it is pointed out that the express exception of trucking service in the Retirement Act precludes a company which is engaged exclusively in trucking from being an "employer" under that provision of the Act which brings in companies owned or controlled by, or under

common control with, a "carrier" and performing service in connection with railroad transportation. It is pointed out, however, that the status of trucking companies may be reconsidered in the event that the Interstate Commerce Commission should rule that certain classes of truckers are carriers by railroad subject to Part I of the Interstate Commerce Act. Meanwhile, attention is called to the fact that if an individual is an "employee" within the meaning of the Retirement Act, i.e., if he is subject to the continuing authority of an "employer" under the Act, he is covered even though he be engaged solely in the performance of trucking service.

The Review also reveals that railroad officers and others, who will later train claim agents for the Railroad Unemployment Act, are being instructed in the administration of that Act in all regional cities. The training consists of "an intensive course lasting two days."

Oral Arguments on Southern Rate Complaint

The Interstate Commerce Commission on June 1 and 2 heard oral arguments on the proposed report by Commissioner Lee and Examiner Corcoran on the so-called Southern governors' rate complaint—No. 27,746, *The State of Alabama vs. The New York Central Railroad Company, et al.* The proposed report, which recommends that the South be given about all it asks, was reviewed in the *Railway Age* of March 4, page 389.

Sixteen counsel representing various parties in interest were heard during the two days of the arguments. Sitting on the bench with his colleagues was Commissioner J. Haden Alldredge, recent appointee, who in his 1937 role as Tennessee Valley Authority transportation economist was the author of a T. V. A. report on alleged freight-rate discriminations against the South and West.

Syndicate Secures Control of Mississippi Barge Line

Control of the Mississippi Barge Line through the purchase of 266,667 shares of stock was acquired by a St. Louis syndicate on June 3, subject to the approval of the Securities and Exchange Commission. The stock was purchased from the Atlas Corporation, which retained 200,000 of the company's 700,000 shares. With the new purchase, the St. Louis syndicate will have more than 50 per cent of the stock. The Mississippi Valley Barge Line is the only privately-owned common carrier on the inland waterways, the other carrier being the Federal Barge Lines. The former company operates between Cincinnati and New Orleans and between St. Louis and New Orleans. During 1938, net profit after all charges amounted to \$288,790, while during the first four months of 1939, it amounted to \$113,112. In 1938 the company carried 446,955 tons with four towboats and 80 barges. Fifteen additional barges are being constructed.

Bills in Congress

The House of Representatives on June 5 passed H.R.5474, carrying amendments to the Railroad Unemployment Insurance

Act along lines recommended by the Railroad Retirement Board to facilitate administration. An identical bill (S.2017) has been reported favorably by the Senate committee on interstate commerce.

Chairman Wheeler of the Senate committee on interstate commerce has appointed sub-committees to consider Senate Joint Resolution 58, which the chairman introduced to provide for an Interstate Commerce Commission study of the feasibility and desirability of postalizing railroad rates; and S.2444 introduced by Senator Burke, Democrat of Nebraska, "to prohibit certain discriminatory practices with respect to the granting of transit privileges." The postalization resolution sub-committee is headed by Senator Bone, Democrat of Washington, but no date has yet been set for hearings. Senator Truman, Democrat of Missouri, heads the sub-committee considering S.2444, and hearings will begin June 15.

Senator Schwellenbach, Democrat of Washington, has introduced two bills (S.2554 and S.2555) to amend the act relating to the retirement of employees of the Alaska Railroad.

House Sub-Committee Still Considering Transport Bills

No authoritative word has yet been heard concerning what type of general transportation legislation may emerge from the House committee on interstate and foreign commerce which is now considering S.2009 as passed by the Senate as well as the omnibus bill introduced by Chairman Lea (H.R.2531) and the committee-of-six bill (H.R.4862), also introduced by Mr. Lea. Hearings on these House measures were concluded some time ago and a sub-committee has since been at work framing a bill to be recommended to the full committee for reporting to the House.

Reports are about Capitol Hill to the effect that the House committee will bring out a bill embodying substantially the same provisions as S.2009, although it may reject the idea of codifying the Interstate Commerce Act in favor of enacting a separate Water Carrier Act as Part III to the Interstate Commerce Act, or otherwise insert the new legislation as amendments to existing law.

Equipment Installed

Class I railroads in the first four months of 1939 put in service 6,817 new freight cars, according to the Association of American Railroads. Of that number 1,713 were installed in April. In the first four months of 1938 Class I roads put 5,302 in service.

New steam locomotives put in service in the first four months of 1939 totaled nine compared with 94 in the same period of 1938. New electric and Diesel-electric locomotives installed in the four months' period this year totaled 70 compared with 49 in the same period last year.

Class I railroads on May 1 had 6,391 new freight cars on order compared with 4,867 on the same day last year, and 6,502 on April 1. New steam locomotives on order on May 1, totaled 61, the same as on May 1 last year and 62 on April 1, 1939. New electric and Diesel-electric locomotives on order on May 1 this year

numbered 23 compared with 10 one year ago and 33 on April 1, 1939.

Freight cars and locomotives leased or otherwise acquired are not included in the above figures.

Old Colony Files Reorganization Plan

The Old Colony has filed with the Interstate Commerce Commission a plan of reorganization providing for the conveyance of the most profitable portions of its property to the reorganized New York, New Haven & Hartford and the abandonment by January 1, 1941, of other unprofitable parts. The Old Colony plan disclosed the fact that the road plans to reorganize separately for the time being with the remaining unprofitable portions of its lines and to enter into a new lease arrangement with the New Haven covering these properties until such a time as the abandonment can be effected.

The properties which the road proposes to abandon by January 1, 1941, comprise the so-called Boston group, including the lines from Boston to Middleboro, and Plymouth, which is the commuting area around Boston. The Western and Cape Cod groups would be conveyed to the New Haven free of any lien. The plan provides that all of the Boston group would be abandoned with the exception of the Market Terminal in South Boston and the Union Freight Railroad.

As its part of the plan it is proposed that the New Haven trustees release and discharge their claims against the Old Colony, its properties and earnings arising out of operation since 1935; that there be issued by the reorganized New Haven to the holders of the Old Colony mortgage bonds 20 per cent in fixed interest bonds, 40 per cent in income bonds and 40 per cent in preferred stock; that the New Haven settle claims of the Boston & Providence and of the Providence, Warren & Bristol against the Old Colony for damages from the rejection of their leases; that the New Haven surrender and cancel shares of the outstanding stock of the Old Colony now owned by it, and that the New Haven pay in cash all reorganization expenses.

The plan also provides that the reorganized Old Colony, which would operate temporarily and on a restricted basis the properties proposed to be abandoned, would have outstanding only the 25,008 shares of its capital stock now held by the public.

Fletcher Asks Elimination of Capital Gains Tax

Judge R. V. Fletcher, vice-president and general counsel for the Association of American Railroads, appeared before the House ways and means committee studying tax revision and urged it to eliminate the income tax, as applied to railroads in financial difficulties, on the profits derived from the purchase of their own securities. At present the law requires corporations to pay income taxes on the difference between what they pay for their securities and their par value.

Mr. Fletcher told the committee that the total bonded debt of the railroads is now about \$10,500,000,000, but that if the in-

come tax were eliminated on security-purchase profits the carriers would be able within a period of not to exceed five years to reduce their indebtedness to about \$8,000,000,000, with a resultant saving of about \$90,000,000 yearly on fixed charges.

The present market value of railroad securities, he told the committee, is about \$6,000,000,000. He conceded, however, that if the railroads were able to obtain money to buy securities having a market value under 80 cents on the dollar, the securities might appreciate in value. The railroads would benefit, nevertheless, he added, since the holders of the securities would eventually sell if they discovered that the railroads were not going to buy on a more or less artificial price basis. Judge Fletcher also told the committee that bonds of some railroads were selling at from 11 to 45 cents on the dollar.

The A. A. R. general counsel advocated a five-year trial period in which the law

would abate the income tax against security purchases and suggested to the committee that it apply only to railroads in financial difficulty.

Chairman Doughton, Democrat of North Carolina, and other members of the committee said that they favored help for the distressed carriers, but that the only question was how this was to be done without creating tax loopholes through which other corporations including railroads not in distress might escape taxation.

I. C. C. Compilation of Income and Balance Sheet Items for March

The Interstate Commerce Commission's Bureau of Statistics on June 1 made public its latest monthly compilation of selected income and balance sheet items, showing March's net deficit of the Class I roads as \$10,505,377 and that for 1939's first quarter as \$43,590,874, as previously reported by

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 135 Reports (Form IBS) Representing 140 Steam Railways
(Switching and Terminal Companies Not Included)

TOTALS FOR THE UNITED STATES (ALL REGIONS)

For the month of March		For the three months of	
1939	1938	1939	1938
Income Items			
1. Net railway operating income.....	\$34,316,892	\$14,728,276	\$85,808,339
2. Other income	9,596,948	10,510,025	31,753,001
3. Total income	43,913,840	25,238,301	117,561,340
4. Miscellaneous deductions from income	2,101,736	2,120,593	6,239,193
5. Income available for fixed charges	41,812,104	23,117,708	111,322,147
6. Fixed charges:	11,573,969	10,341,932	
6-01. Rent for leased roads and equipment	39,550,416	39,560,598	32,583,627
6-02. Interest deductions	179,963	215,177	\$118,748,393
6-03. Other deductions	51,304,348	50,117,707	541,608
6-04. Total fixed charges	*9,492,244	*26,999,999	151,873,628
7. Income after fixed charges	1,013,133	1,012,573	*40,551,481
8. Contingent charges	*10,505,377	*28,012,572	3,039,393
9. Net income	16,894,502	16,882,766	*43,590,874
10. Depreciation (Way and structures and Equipment)	1,715,041	661,936	50,422,814
11. Federal income taxes	1,192,446	1,391,157	5,280,012
12. Dividend appropriations:	464,325	464,325	
12-01. On common stock			13,483,900
12-02. On preferred stock			4,051,244
Balance at end of March			
1939			
1938			
13. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	\$644,844,294	\$659,289,982	
14. Cash	451,797,309	310,439,745	
15. Demand loans and deposits	13,721,338	7,903,202	
16. Time drafts and deposits	19,955,556	27,403,272	
17. Special deposits	61,293,820	73,440,391	
18. Loans and bills receivable	1,323,461	6,713,968	
19. Traffic and car-service balances receivable	59,879,172	52,914,840	
20. Net balance receivable from agents and conductors	43,092,397	39,055,423	
21. Miscellaneous accounts receivable	118,891,333	136,014,873	
22. Materials and supplies	330,455,430	380,376,609	
23. Interest and dividends receivable	18,460,020	22,960,442	
24. Rents receivable	1,366,499	1,416,334	
25. Other current assets	3,903,119	4,309,493	
26. Total current assets (items 14 to 25)	\$1,124,139,454	\$1,062,948,592	
Selected Liability Items			
27. Funded debt maturing within 6 months†	\$266,824,784	\$221,688,647	
28. Loans and bills payable‡	247,040,555	238,867,417	
29. Traffic and car-service balances payable	74,497,368	67,636,060	
30. Audited accounts and wages payable	225,257,722	230,050,823	
31. Miscellaneous accounts payable	69,863,583	72,746,068	
32. Interest matured unpaid	860,006,201	711,149,788	
33. Dividends matured unpaid	11,143,186	13,853,470	
34. Funded debt matured unpaid	645,378,382	513,346,836	
35. Unmatured dividends declared	1,188,977	839,031	
36. Unmatured interest accrued	89,062,548	92,484,644	
37. Unmatured rents accrued	31,821,297	29,548,409	
38. Other current liabilities	26,514,654	21,192,558	
39. Total current liabilities (items 28 to 38)	\$2,281,774,473	\$1,991,715,104	
40. Tax liability (Account 771):			
40-01. U. S. Government taxes	\$55,706,068	\$61,878,028	
40-02. Other than U. S. Government taxes	143,050,457	145,678,155	

* Deficit or other reverse items.

† Represents accruals, including the amount in default.

‡ Includes payments which will become due on amount of principal of long-term debt (other than that in Account 764, Funded debt matured unpaid) within six months after close of month of report.

§ Includes obligations which mature not more than 2 years after date of issue.

NET INCOME OF LARGE STEAM RAILWAYS WITH ANNUAL OPERATING REVENUES ABOVE \$25,000,000

(Switching and Terminal Companies Not Included)

Name of railway	Net income after deprec.		Net income before deprec.	
	For the three months of 1939	1938	For the three months of 1939	1938
Alton R. R.	\$501,770	\$596,887	\$437,613	\$506,031
Atchison, Topeka & Santa Fe Ry. System [†]	2,757,468	5,466,033	200,877	2,509,188
Atlantic Coast Line R. R.	1,046,060	1,659,563	1,578,032	2,164,959
Baltimore & Ohio R. R.	2,208,840	7,473,822	409,672	5,642,760
Boston & Maine R. R.	319,617	1,588,054	70,095	1,182,586
Central of Georgia Ry. [†]	707,615	865,682	494,455	651,383
Central R. R. of New Jersey	1,118,538	962,924	769,047	607,693
Chesapeake & Ohio Ry.	4,529,677	2,602,427	6,598,327	4,680,463
Chicago & Eastern Illinois Ry. [†]	398,953	500,033	250,727	343,694
Chicago & North Western Ry. [†]	5,089,208	5,938,642	3,846,908	4,668,097
Chicago, Burlington & Quincy R. R.	282,128	1,728,056	1,013,688	470,547
Chicago Great Western R. R. [†]	368,131	761,417	233,198	626,926
Chicago, Milwaukee, St. Paul & Pacific R. R. [†]	4,979,744	5,929,591	3,532,044	4,507,154
Chicago, Rock Island & Pacific Ry. [†]	2,889,943	3,687,472	1,866,571	2,649,781
Chicago, St. Paul, Minneapolis & Omaha Ry.	961,518	867,223	816,267	719,891
Delaware & Hudson R. R.	264,758	705,119	519,522	442,909
Delaware, Lackawanna & Western R. R.	665,479	1,143,409	54,721	524,897
Denver & Rio Grande Western R. R. [†]	1,452,723	1,751,839	1,149,778	1,451,606
Elgin, Joliet & Eastern Ry.	557,827	370,067	803,272	118,931
Erie R. R. (including Chicago & Erie R. R.) [†]	1,412,113	3,798,660	492,474	2,852,482
Grand Trunk Western R. R.	662,772	1,614,187	372,860	1,331,872
Great Northern Ry.	4,079,589	4,840,606	3,154,155	3,909,853
Illinois Central R. R.	532,904	549,509	1,130,505	1,065,723
Lehigh Valley R. R.	209,149	1,135,009	323,892	586,586
Long Island R. R.	982,227	869,062	688,152	575,851
Louisville & Nashville R. R.	1,132,578	992,591	2,215,569	83,699
Minneapolis, St. Paul & Sault Ste. Marie Ry. [†]	2,301,297	2,155,111	1,998,310	1,848,310
Missouri-Kansas-Texas Lines	1,149,897	1,266,756	815,809	939,706
Missouri Pacific R. R. [†]	4,052,627	4,514,616	2,962,982	3,411,120
New York Central R. R. [†]	4,304,073	10,196,338	351,920	6,181,215
New York, Chicago & St. Louis R. R.	74,459	1,011,663	469,168	585,557
New York, New Haven & Hartford R. R. [†]	1,242,125	3,597,412	393,350	2,754,330
Norfolk & Western Ry.	5,527,495	2,041,722	6,771,070	3,287,038
Northern Pacific Ry.	3,199,479	3,723,828	2,352,403	2,877,316
Pennsylvania R. R.	2,042,664	3,844,507	8,499,667	2,284,516
Pere Marquette Ry.	14,115	1,194,547	579,423	537,933
Pittsburgh & Lake Erie R. R.	356,295	2,209	917,198	564,205
Reading Co.	770,089	189,073	1,548,209	592,436
St. Louis-San Francisco Ry. [†]	3,217,541	3,820,326	2,449,235	3,039,295
St. Louis Southwestern Lines [†]	470,567	488,123	315,755	332,379
Seaboard Air Line Ry. [†]	1,127,732	1,540,846	592,676	1,031,930
Southern Ry.	253,085	2,548,703	592,968	1,781,899
Southern Pacific Transportation System||	4,327,218	7,916,028	2,352,726	5,837,852
Texas & Pacific Ry.	112,981	8,995	412,987	289,205
Union Pacific R. R. (including leased lines)	892,020	606,085	2,776,810	2,460,496
Wabash Ry. [†]	1,422,782	2,520,521	886,899	1,982,543
Yazoo & Mississippi Valley R. R.	154,438	187,136	36,801	49,371

* Deficit.

† Report of receiver or receivers.

‡ Report of trustee or trustees.

§ Under trusteeship, Erie R. R. only.

|| Includes Atchison, Topeka & Santa Fe Ry., Gulf, Colorado & Santa Fe Ry., and Panhandle & Santa Fe Ry.

¶ Includes Boston & Albany, lessor to New York Central R. R.

Includes Southern Pacific Company, Texas & New Orleans R. R. and leased lines. The report contains the following information: "Income reported hereon excludes offsetting debits and credits for rent for leased roads and equipment, and bond interest, between companies included herein. Operations of all separately operated solely controlled affiliated companies, during the corresponding periods resulted in a net deficit of \$2,051,660 and \$2,002,584 respectively. The 1939 deficit includes \$211,172 for the month and \$633,516 for the period, representing interest on bonds of such companies owned by Southern Pacific Company not taken into income and, therefore, not included in the 1939 amounts reported against items 2 and 9 of this statement. The consolidated deficit for Southern Pacific Transportation System and separately operated solely controlled affiliated companies for the month amounted to \$996,875, and for the period \$5,745,362.

the Association of American Railroads and noted in the *Railway Age* of May 27. The foregoing compare with a March, 1938, net deficit of \$28,012,572 and one of \$105,737,482 for the first three months of last year.

Seventy-five Class I roads reported net deficits for March, while 57 reported net incomes; in March, 1938, there were 94 net deficits and 38 net incomes. For this year's first quarter 79 Class I roads were in the red as compared with 101 in the first three months of 1938. The consolidated statement and that showing the net incomes or net deficits of roads having annual operating revenues above \$25,000,000 are given in the accompanying tables.

3000 School Kids on Seattle Excursion

One thousand six hundred railroad tickets on sale at 9 a. m., 1,400 more added at noon, all gone at 7 p. m. That in a nutshell is the story of the "sell-out" on the Seattle Post-Intelligencer's youth-rail-edu-

cation excursion operated over the Great Northern from Seattle, Wash., to Blaine on May 20. The purpose of the excursion was to provide youngsters who had never ridden on a train with an opportunity to take a long and interesting ride and to acquaint themselves with the countryside of the north. The demand for tickets was so great on the morning of May 16, when the tickets were placed on sale, that the Great Northern decided to add two more trains and to increase the number to four. Because these four 14-car trains fell far short of meeting the demands, the railroad immediately announced that a second excursion would be run on June 3. Three thousand tickets for this excursion were placed on sale at 9 a. m. on May 24 and at 6 p. m. the entire lot was sold, with children still applying for tickets.

The fare was fifty cents for the round trip, 238 miles, for youngsters under eighteen, and a dollar a round trip for those eighteen or over and adults. Trains left between 8:40 a. m. and 9 a. m., arrived at Blaine 3½ hr. later, and returned to

Seattle between 5:45 p. m. and 6:45 p. m. the same day. The schedule provided for a lay-over of about 1½ hr. at the International Peace Arch and Sam Hill Memorial Park.

Revised Motor Carrier Safety Rules and Regulations

Rules and regulations governing qualifications of employees and safety of operation and equipment of common and contract motor carriers have been revised by the Interstate Commerce Commission in a report and order in Ex Parte No. MC-4, made public this week. The revisions deal with such matters as the qualifications of drivers, driving rules, parts and accessories necessary for safe operation, reporting of accidents and inspection and maintenance; regulations covering hours of service of drivers were not in issue in the proceeding, having been established by the commission's recent order in Ex Parte No. MC-2 with an effective date of March 1.

The present report recalls how the commission in its report of December 23, 1936, set up a "long-term program" of motor carrier safety activities, adding that "with the present revision of the regulations, the major part of the connected program . . . has now been set down in the form of rules." The revised regulations do not apply to private carriers; the possible need for application of I. C. C. safety regulations to such operators is the subject of the pending Ex Parte No. MC-3 proceeding in which a proposed report is expected to be issued in the near future.

With respect to the qualifications of drivers the revised regulations embody two important changes and a few minor modifications. The important changes relate to physical examinations and eye tests for drivers, new drivers being required to submit to the former while all must meet certain eyesight standards based upon those recently recommended by the American Medical Association as desirable for drivers of motor vehicles. The report notes that the revisions make "no changes of major importance" in the rules for the driving of motor vehicles, the commission having rejected a proposal that it establish speed limits in miles per hour wherever such limits are not prescribed by local authorities.

Revisions in the section dealing with parts and accessories for safe operation entail but few changes; lighting and brake requirements are clarified, new provisions are made concerning coupling devices, and a special section is added to cover drive-away operations. "Simplification of administrative procedure," says the report, "is the primary note" of the changes in regulations governing the reporting of accidents. Two new requirements reduce the minimum amount of property damage as constituting a reportable accident from \$100 to \$25, and require fatal accidents to be reported by telegraph or telephone to the proper district director of the Bureau of Motor Carriers.

The section dealing with inspection and maintenance is a new one which becomes Part 6 of the regulations. In this connection the commission recognized that "it would be difficult, if not impossible, to es-

establish comprehensive regulations for the inspection and maintenance of all types of motor vehicles by carriers;" and thus "the mandatory requirements of Part 6 have been reduced to what appear to be certain basic essentials for safety." The remainder is expressed in terms of "recommended practices."

The revised rules and regulations become effective January 1, 1940, with the regulations heretofore promulgated remaining in effect up to that time. Commissioner Lee, in a separate concurring opinion, approved the revisions prescribed; but he did not agree with the idea of applying the physical examination requirement only to new drivers. The examination, he said, should also be required of "the many thousands who are now driving," adding that such a requirement would "go far in the promotion of safety on the highways." Furthermore, Mr. Lee would have prescribed a speed limit in miles per hour for buses and trucks operating in areas where there are no locally-prescribed limits.

New England Roads Make Flat Fare Cut; Eastern Scale Explained

In announcing new round-trip fares based on a sliding scale, as reported in last week's issue, the Eastern carrier's committee noted that the fare plan will cover the entire territory "with certain exceptions in New England." This qualification has been clarified by the announcement this week by the New York, New Haven & Hartford and the Boston & Maine that they will institute a flat round-trip coach rate of 2.25 cents per mile, with a return limit of 60 days. This basic rate will apply to journeys of any length, and hence the principle of a declining per mile rate as the distance increases adopted in the new tariff of the other Eastern carriers will not apply in most of New England. However, it has been pointed out that the average journey in the latter region is relatively short haul and would fall within the 2.25 cents-per-mile fare block of the

new Eastern sliding scale. The B. & M. already has in effect a one-day round-trip fare at 1.8 cents per mile and a three-day round-trip rate at 2 cents per mile.

The question has been raised as to whether the sliding scale of the new Eastern fare plan is based on the one-way or round-trip mileage. For example, the one-way mileage between New York and Philadelphia, Pa., is under 100 miles, and if based thereon the new round-trip rate would fall into block one, or the maximum of 2.25 cents per mile. On the other hand, if the round-trip mileage were the base, the new fare between the two cities would come under block three at a diminished per-mile scale. According to passenger tariff men the new Eastern round-trip fares will be scaled on the basis of present one-way first-class fares and hence the new fare between New York and Philadelphia will be at the maximum per-mile rate.

Eastern railroads have obtained from the Interstate Commerce Commission permission to make the tariffs publishing their reduced passenger fares effective on five days notice. The short-notice tariffs are expected to be filed in time to make them effective by the end of this month.

I. C. C. Reorganizes Itself

The Interstate Commerce Commission on June 8, announced a major re-organization of its internal set-up involving new assignments of work among five new divisions and abandonment of the annual rotating chairmanship heretofore filled on the basis of seniority. Commissioner Joseph B. Eastman was unanimously elected chairman for a three year term beginning July 1, to succeed Chairman Marion M. Caskie, who, the announcement from Secretary W. P. Bartel said, "earnestly supported the change and by refusing to be considered for the enlarged term, voluntarily curtailed his own service as chairman by six months." The general nature of the changes, Mr. Bartel also said, indicates an attempt to proceed further with the assignment of duties on a functional basis, as far

as that is at the present time deemed practical. Five numbered divisions of the Commission of three members each are created as follows:

Division 1—Administrative: Commissioners Eastman, Porter, and Lee.

Division 2—Rates, Tariffs, and Valuation: Commissioners Aitchison, Splawn, and Caskie.

Division 3—Rates, Service, and Safety: Commissioners Mahaffie, Miller, and Alldredge.

Division 4—Finance: Commissioners Porter, Mahaffie, and Miller.

Division 5—Motor Carriers: Commissioners Lee, Rogers, and Alldredge.

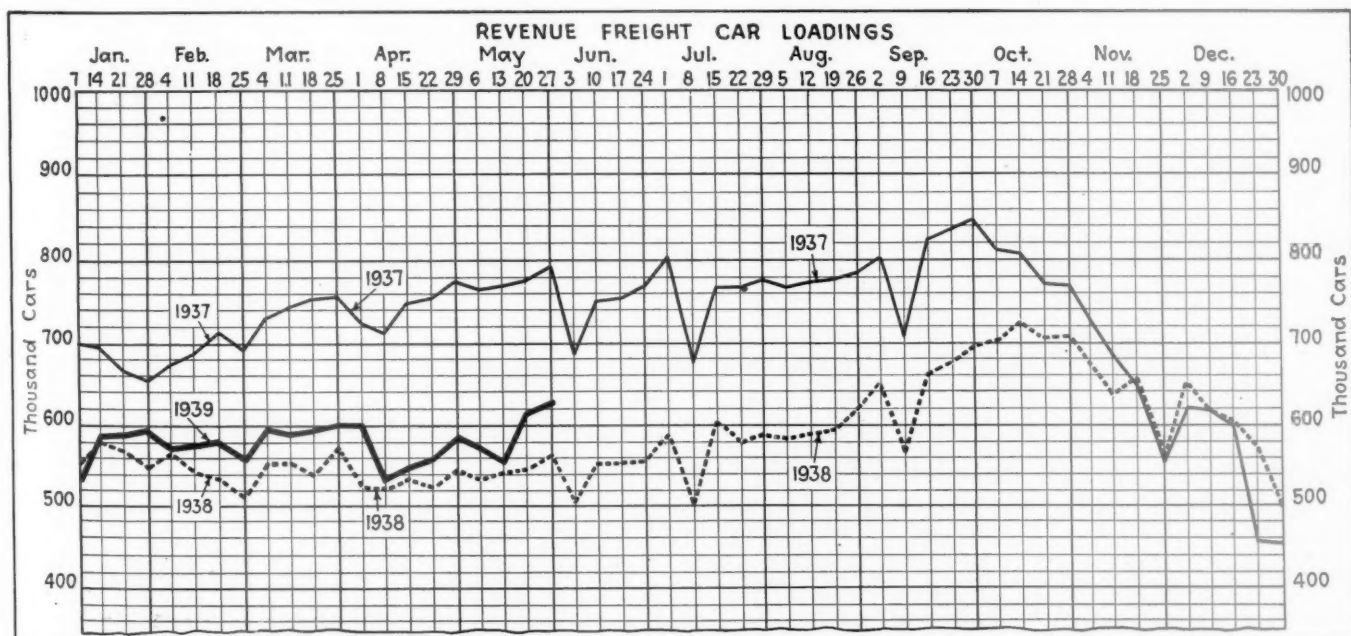
Divisions 2 and 3, The Commission announcement stated, will alternate monthly in hearing arguments in cases within the general scope of the delegation of their authority, and in all cases involving rates, fares, or charges, which have not been reserved to the Commission itself or to some other division.

As there is one vacancy on the Commission, it is pointed out that some readjustment of assignments will be necessary when a new commissioner is appointed and qualifies. "The rearrangement of work," concludes Secretary Bartel "has been designed within the limits of the existing law, and will be subject to greater or less modification if the proposals now before Congress shall become law and thereby considerably change the duties of the Commission."

Freight Car Loading

Revenue freight carloading for week ended June 3 totaled 567,732 cars, the Association of American Railroads announced on June 8. This was a decrease of 59,942 cars, or 9.5 per cent, below the preceding week, due to the Memorial Day holiday, an increase of 65,115 cars, or 13 per cent above the corresponding week in 1938 and a decrease of 121,255 cars, or 17.6 per cent below the comparable 1937 week.

The loadings for the previous week ended May 27 totaled 627,674 cars, an in-



crease of 11,708 cars or 1.9 per cent above the May 20 week, an increase of 65,598 cars or 11.7 per cent above the corresponding week in 1938, but a decrease of 162,829 cars or 20.6 per cent under the comparable 1930 week. The summary for the May 27 week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For Week Ended Saturday, May 27

	1939	1938	1937
Eastern	132,139	124,577	172,076
Allegheny	121,579	102,781	167,301
Pocahontas	45,052	36,588	50,951
Southern	90,909	84,343	106,553
Northwestern	99,833	77,044	132,133
Central Western	95,350	92,628	107,519
Southwestern	42,812	44,115	53,970
Total Western Districts	237,995	213,787	293,622
Total All Roads	627,674	562,076	790,503
Commodities			
Grain and Grain Products	33,904	33,344	27,262
Live Stock	10,706	12,048	12,578
Coal	100,357	98,078	123,024
Coke	4,834	4,375	10,597
Forest Products	29,763	26,841	42,478
Ore	43,670	20,431	77,175
Miscellaneous l.c.l.	152,855	148,526	171,311
Miscellaneous	251,585	218,433	326,078
May 27	627,674	562,076	790,503
May 20	615,966	545,789	775,074
May 13	555,396	541,808	769,560
May 6	572,857	536,149	763,495
April 29	586,015	543,089	777,827

Cumulative Total,
21 Weeks12,194,405 11,470,974 15,275,610

In Canada.—Carloadings in the Dominion for the week ended May 27 (which contained a holiday) were 41,572, as compared with 47,081 in the previous week and 40,550 last year, according to the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
May 27, 1939	41,572	20,335
May 20, 1939	47,081	23,734
May 13, 1939	51,432	23,610
May 28, 1938	40,550	19,479

Cumulative Totals for Canada:		
May 27, 1939	893,978	476,203
May 28, 1938	929,804	447,681
May 29, 1937	993,982	597,740

Lehigh Valley Inaugurates "John Wilkes" New York-Wilkes-Barre

A nine-car, "cleanlined" all air-conditioned train titled the "John Wilkes" was placed in daily round-trip service between New York and Wilkes-Barre, Pa., by the Lehigh Valley on June 4. Named

after an 18th century member of the British House of Commons, whose name was incorporated into Wilkes-Barre by the town in honor of his championing of the rights of the American colonies, and is still notorious for his authorship of certain licentious writings and "fast" living, the "John Wilkes" was christened on the morning of June 2 in Wilkes-Barre by Mrs. E. G. Smith, wife of a newspaper publisher and director of the Lehigh Valley, after which it departed for a preview run to Jersey City, N. J. Prior to the ceremonies, the train was placed on public exhibition during which more than 8,000 persons inspected the interior. In Hazleton, Pa., a civic program was also held to initiate the new run and one of the city's main streets closed off to permit a public inspection of the train.

The "John Wilkes" consists of one baggage-express, one mail-baggage, four coaches, one club car, one diner and one Pullman chair car and a "Pacific" type locomotive, all previous equipment reconditioned by the road in its Sayre, Pa., shops, with the exception of the chair car which was modernized by Pullman. The exterior of the train is decorated in Cornell red, with black trim and white striping. The locomotive is streamlined in the so-called "bullet-nose" motif. The recently-developed fluorescent type of interior lighting is installed in the coaches as well as the club and dining cars.

To encourage the interest of shopmen at Sayre in the road's modernization program, each employee who worked on the train was invited, with wife or sweetheart, on a special pre-inauguration trip in the reconditioned equipment to Manchester, Pa., and return. Small bronze tablets have been placed on the aisle doors of each car stating that the train was modernized at the Sayre shops by the Lehigh Valley forces. The work was carried out under the direction of Otto Kuhler, consultant designer, and J. P. Laux, superintendent of motive power.

Great Northern Campaigns for Traffic

"The road of hospitality, you're a guest on the Empire Builder," is the theme of a campaign being conducted by the Great Northern to stimulate passenger traffic. In its campaign, the road has gone beyond

physical equipment and route to hold passengers, employing the principle that if the individual passenger could be made to feel at home when he steps on a Great Northern train, he would be a permanent customer. Advertising carries the same thought by picturing the interior of a train, with passengers enjoying themselves and being waited on by porters and dining car waiters. In addition, ticket agents supply porters on each Pullman car with a list of Pullman passengers, with the names opposite their berth, so that when a passenger boards the train, the porter can address him by name.

Federal Barge Line "Prospered" in '38

(Continued from page 994)

ful. Private operators would abandon such lines, and such operators would not sustain the long litigation necessary in the establishment of joint routes and rates to benefit the interior. It is estimated that this Corporation has expended approximately five million dollars in the establishment of joint routes and rates to extend to the people of the interior the same savings in cents per hundred pounds as is extended to people on the river banks. . . . The amount paid to outside traffic and other agencies alone amounted to \$142,419."

I. W. C. had its labor troubles in 1938; but General Ashburn does not feel that such disturbances were any more serious than "any other corporation experiences during the first year of its dealing with unions." The employees, he charged, "have repeatedly failed to carry out their part of the contract with us," with resulting strikes at Cairo, Memphis, Helena, Baton Rouge, St. Louis and Peoria. However, the general is hopeful that "with age and experience our unions will realize that they must live up to their contracts. . . ." Previously the report had noted that the Corporation during 1938 paid \$3,418,561 in wages, the average number of employees being 3,385.

Included in the report is a review of I. W. C. operations from June 1, 1924, to December 31, 1938, which was prepared by Secretary-Treasurer Bartley. General Ashburn incorporated this cumulative statement for the "particular information" of the Secretary of War, and "for the benefit, particularly of Congress, prospective purchasers, and the general public." This statement shows that the Corporation during the period under review obtained total funds of \$24,298,777, of which \$12,000,000 came from the sale of its capital stock to the government, \$3,386,459 from income and \$7,668,209 from depreciation reserves. The total of funds applied is given as \$19,976,506 (\$19,017,890 for new equipment), leaving an operating capital balance of \$4,322,270 as of December 31, 1938.

The review by Secretary-Treasurer Bartley is followed by General Ashburn's notation of the fact that I. W. C. floating equipment was increased in 1938 by the addition of 20 cargo barges, three new towboats, one tug and one rebuilt towboat. Total 1938 expenditures for new equipment amounted to \$2,956,316. Next the general



The New "John Wilkes" of the Lehigh Valley on Public Inspection at Wilkes-Barre, Pa.

discusses in turn the "extension of operations for the benefit of agriculture," in which connection he reports that I. W. C. "is reliably informed that the farmer received on all grain handled through Muscatine, Iowa, around three million bushels, an average of four cents more per bushel than if it had been shipped by rail." As pointed out in the *Railway Age* of April 15, page 671, General Ashburn, in testifying at Senate committee hearings on S. 2009, was unable to convince Senators Wheeler, Democrat of Montana, and Reed, Republican of Kansas, that the farmer gets the benefit of "cheap" water transportation.

Other sections of the general's report deal with "Agitation for New Terminals"—Clinton, Omaha and Sioux City "are all clamoring for, and demanding terminal facilities for the interchange of freight by water, rail and motor;" and "Concrete Results Obtained Through Water Transportation"—it is "locating industry in the midst of agriculture." At another point General Ashburn asks: "Do we serve anyone but riverbank communities?" He answers with the assertion that I. W. C. rates "aim at the consummation that every shipper in the interior shall have the same saving in cents per hundred pounds as his competitor on the river," adding that it is not always possible to do this, "because of the rail rate structure;" but "we are gradually approaching our object, step by step, decision by decision, of the Interstate Commerce Commission."

The report's section on traffic matters reveals that all divisions handled in 1938 a total of 2,767,210 tons, an increase of 31 per cent over 1937. Meanwhile operating expenses per ton dropped 21 per cent from \$3.10 to \$2.44; while there was a "marked drop" in revenue per ton—the 1938 average being \$2.74 as compared with 1937's \$3.04. The increase in grain tonnage in 1938 as compared with the previous year "approximated the total increase in tons of all freight handled."

Land-Grant Bills Get Senate Hearing

(Continued from page 995)

paid for "time and again" in rate reductions.

He pointed out that since 1876 the government has been receiving a 50 per cent reduction from commercial freight rates and 20 per cent off the mail pay. He went on to stress the fact that the original idea was to obtain the concessions for the movement of troops and military supplies; but land-grant rates have in recent years been made to apply to "all sorts of projects." Land-grant rates, Dr. Duncan insisted at another place, cannot be considered as subsidies, because the United States Supreme Court has held that they are contracts. Other transport agencies, he added, are required to make no corresponding concessions to the government for the subsidies they receive.

Mr. Nash, presenting arguments for repeal from the standpoints of railroad traffic departments and shippers, pointed out how government activities of recent years

have converted a large part of what was formerly commercial traffic into government traffic, making the government the country's largest shipper. Also, Mr. Nash called attention to what he regarded as discrimination against industries located on non-land-grant roads, in that they are at a disadvantage in bidding for government business against industries located on land-grant lines. Furthermore in his opinion the general accounting office has been unfair in piecing together circuitous routes where land-grant rates can be applied, but which no commercial traffic would seek. He went on to cite, among others, an instance wherein the government purchased Chicago steel for use at Tulsa, Okla., on an f.o.b. destination basis, obtaining from the railroads land-grant reductions for the movement of the steel but deducting the full Chicago-Tulsa rate from the remittance it made to the steel company.

Statistician Monroe of the Bureau of Railway Economics filed a series of charts showing the depressed financial condition of the railroads with particular emphasis on the plight of the land-grant lines. Summing up for the railroads, A. A. R. Assistant General Counsel Souby filed a memorandum setting forth the railroads' idea of the language which should be in a repeal bill, if the committee should decide to report one favorably. In this connection he wanted to eliminate the provision, contained in one of the bills before the committee, which would leave the land-grant rates applicable to the transportation of troops and military supplies. He also made his above-mentioned comment on the idea of conditioning repeal upon return to the government of granted lands remaining in railroad hands.

Meanwhile Chairman Keeler of the N. I. T. League legislative committee had made his presentation in favor of repeal on behalf of that organization and the Pittsburgh (Pa.) Chamber of Commerce. He made, among others, the same points as did Mr. Nash, i. e., that industries on land-grant roads enjoy a preference in the competition for government business. Like Mr. Souby, Mr. Keeler also called for the elimination of any provision to maintain the land-grant deductions on military traffic. The organizations he represented, he also said, do not favor S. 2294, the bill providing only for a study of the land grant situation—they think the facts justifying repeal are now available.

Merchants' Group Asks Regulation of "Gypsy Peddlers"

How the ever-breeding army of itinerant "gypsy" truckers,—transient vendors who buy their loads and sell them on the public highways—are putting established, tax-paying responsible merchants and distributors out of business and reducing many a small town to "a crossroads stop for gasoline and free air" is the story told in a 6-page pamphlet recently issued by Associated Producers & Distributors in an appeal to "home-town" citizens. An organization sponsored by chambers of commerce, farm and co-operative associations and trade organizations "interested in just and equitable highway transportation and mer-

chandising practices in your state," the association asks the support of citizens to the provisions of a blanket bill which it proposes to introduce shortly in various state legislatures.

Of particular interest to the railroads are the following corrective aims: (1)



Courtesy Associated Producers & Distributors, Cartoon by Darrell Porter

Tax-paying Merchants Assail Itinerant Truck-Peddlers as Small Town Nemesis

that every itinerant truck-peddler be required to secure a license to operate as a merchant, which registration would require a legal address for use by state and local tax assessors and collectors; and (2) that every peddler be required to procure an occupational license for the privilege of using the public highway "as a storeplace for carrying on his business." The proposed regulatory bill would exclude farmers hauling self-produced commodities, merchants hauling to and from an established place of business, for-hire trucks and private carriers hauling commodities "for their own consumption or personal use." [The effect of the "gypsies" on the carriers was discussed in a feature article appearing in the *Railway Age* of January 21, page 160.—Ed.]

Construction

MISSOURI PACIFIC.—A line change 2,430 ft. long east of McCracken, Kan., is being built at a cost of approximately \$40,000, which will reduce a 4 deg. and 15 min. curve to a two degree curve. The project involves 20,000 cu. yd. of grading and the construction of a new bridge. The contract for the grading has been awarded the List Construction Company, Kansas City, Mo., and the bridge, which is being constructed by company forces, will be 121 ft. long and will consist of five 24-ft. wide flange I-beam spans, with a ballast deck

resting on concrete pile bents and abutments.

ST. LOUIS SOUTHWESTERN.—A contract amounting to \$80,377 has been awarded the Austin Bridge Company and the Austin Road Company, Dallas, Tex., by the State Highway Department of Texas for an underpass on Glenwood Boulevard in Tyler, Tex. The single track bridge, which will cost approximately \$30,000, will consist of four I-beam spans on reinforced concrete spread footing piers and abutments. The end spans will be 28 ft. long and the interior spans 37 ft. 9 in. long.

UNION PACIFIC.—A contract amounting to \$41,448 has been awarded the Silver State Construction Co., Inc., Fallon, Nev., by the Department of Highways of Nevada for the construction of a highway underpass under the Union Pacific approximately 15 miles northeast of Las Vegas, Nev. The bridge will be an I-beam span with ballast deck on concrete abutments.

Equipment and Supplies

LOCOMOTIVES

THE PENNSYLVANIA has authorized the construction of twenty-five 21,000 gal. capacity locomotive tenders, to cost approximately \$750,000. The tenders will be used in the operation of M-1 type locomotives in through freight service, and will permit the reassignment and redistribution of existing tenders of modern type among locomotives in main line through passenger service. They supplement an equal number of tenders of similar capacity authorized last year.

FREIGHT CARS

THE ALUMINUM COMPANY OF AMERICA has ordered 10 covered hopper cars of 70 tons' capacity from the Pullman-Standard Car Manufacturing Company.

THE REPUBLIC STEEL CORPORATION has ordered four air-dump cars of 50 tons' capacity from the Pressed Steel Car Company.

THE LEHIGH & NEW ENGLAND has ordered from the American Car & Foundry Company, 50 special type, hatchway roof, hopper bottom steel cars, of 70 tons' capacity to be used for bulk cement lading. Inquiry for this equipment was reported in the *Railway Age* of June 3.

SIGNALING

BALTIMORE & OHIO.—Sealed bids will be received in the office of the purchasing agent of this road, Charles and Baltimore streets, Baltimore, Md., until 11:00 a. m. (e.s.t.) June 20, for material required to install flashing light signals F. A. route 4, and Alton Railroad crossing at East Al-

ton, Ill. Work is being done under the federal grade crossing program.

IOWA.—Sealed bids will be received by the Iowa State Highway Commission, Ames, Iowa, until 10:00 a. m., June 20, for furnishing signal material required for the protection of 18 grade crossings on the Chicago, Rock Island & Pacific, 23 grade crossings on the Illinois Central, and one grade crossing on the Des Moines Union Railway.

NORTH CAROLINA.—Sealed proposals will be received by the North Carolina State Highway and Public Works Commission at the office of William L. Craven, bridge engineer, Raleigh, N. C., until 10:00 a. m., June 27, for the installation of flashing light signals as follows: Three on the High Point, Randleman, Asheboro & Southern, one on the Piedmont & Northern, one on the Durham & Southern and one on the Atlantic & North Carolina.

THE KANSAS CITY TERMINAL RAILWAY COMPANY has placed an order with the Union Switch & Signal Co., covering apparatus for a new electro-pneumatic interlocking plant, using searchlight signals, at Sheffield, Tower 8. The order includes an 111-lever Model 14 interlocking machine having 65 working levers, with 46 spare spaces providing for future additions, with the present layout consisting of 80 signals and 43 Style A-5 electro-pneumatic switch movements equipped with "CP" (cut-off) valves. The Terminal Company's construction force will carry out the field installation.

MOTOR VEHICLES

THE COUNTY TRANSPORTATION COMPANY has ordered 2 buses from the General Motors Corporation.

THE CONNECTICUT COMPANY has ordered 46 buses from the General Motors Corporation and 4 buses from the White Motor Company.

Supply Trade

The Bird-Archer Company has moved its Chicago office from 122 South Michigan avenue to its plant at 2030 North Natchez avenue.

J. Frederic Wiese, assistant to vice-president of the Lukens Steel Company, Coatesville, Pa., has been appointed general manager of sales, according to an announcement made by F. H. Gordon, vice-president in charge of sales of the company.

OBITUARY

J. T. Geoghegan, sales engineer of the American Car & Foundry Company, with headquarters at Chicago, died on June 6 of carcinoma of the throat.

Financial

ALABAMA & WESTERN.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon its entire line extending from Chipley, Fla., to Greenhead, 19.3 miles and to abandon operation over the line of the Sale-Davis Company of Florida, Inc., extending from Greenhead, Fla., to South Port, 18.8 miles.

BALTIMORE & OHIO.—*Abandonment.*—This road has applied to the Interstate Commerce Commission for authority to abandon an 8.7-mile branch line in Somerset County, Pa., extending from White Creek Junction to a point beyond Unamis.

CHICAGO & EASTERN ILLINOIS.—*Reorganization Fees.*—Petitions for fees totaling \$255,961 in connection with the reorganization of the Chicago & Eastern Illinois were taken under advisement by the federal district court at Chicago on June 5. The Interstate Commerce Commission previously made recommendations as to the amounts of the fees to be paid. The court also has under advisement the question of approving a reorganization plan for the road, which has been in the hands of the court since October, 1934. It is expected that the court will make a ruling on the reorganization within ten days.

CHICAGO GREAT WESTERN.—*Reorganization Fees.*—Petitions for attorneys' fees and expenses totaling \$248,135 in connection with the reorganization of the Chicago Great Western were referred to the Interstate Commerce Commission on June 6 in an order issued by the federal district court at Chicago. The order seeks the Commission's maximum limit of expenses and fees to be allowed, and when these have been established they will be returned to the court at Chicago for its decision. The claims, representing charges for past services, expenses and attorneys' fees as well as estimated future expenses and fees, include \$94 for the Reconstruction Finance Corporation, \$101,018 for the First Mortgage Bond Holders Committee, \$35,555 for Jacques Cohen, representing various holders of first mortgage bonds, \$41,534 for the Guaranty Trust Company of New York, \$39,747 for the Protective Committee for the preferred stockholders, \$19,100 for the committee for the holders of the common stock and \$1,500 for the Central Hanover Bank and Trust Company.

DELAWARE & HUDSON.—*Abandonment.*—This road has applied to the Interstate Commerce Commission for authority to abandon a portion of its Baldwin branch, extending from Delano Junction, N. Y., to Baldwin, 4.5 miles.

LEHIGH VALLEY.—*Abandonment by the Loyalsock.*—Division 4 of the Interstate Commerce Commission has authorized this company to abandon the operation and the Loyalsock to abandon the line extending from Splash Dam, Pa., to Lopez, 13 miles.

LEHIGH VALLEY.—*Collateral.*—This road has applied to the Interstate Commerce Commission for authority to continue from

June 30 to December 31 the pledge of \$7,500,000 of its general consolidated mortgage five per cent bonds, due in 2003, as collateral security for short term notes representing three per cent loans in the amount of \$925,000 from the Philadelphia National Bank, Philadelphia, Pa., and \$437,500 from the Marine Trust Company, Buffalo, N. Y.

MINNEAPOLIS & ST. LOUIS.—Reorganization.—The Minneapolis & St. Louis Railway Company has applied for Interstate Commerce Commission approval of the \$5,000,000 Reconstruction Finance Corporation loan which it seeks to negotiate in connection with the recently-announced plan to split the road into two separate operating companies. (See *Railway Age* of May 20, page 882.) I. C. C. hearings on the revamping plan have been set for June 26 at St. Paul, Minn.

MISSOURI PACIFIC.—Refunding of Bonds of the Prescott & Northwestern.—The Prescott & Northwestern has asked the Interstate Commerce Commission for authority to refund \$75,000 of six per cent first mortgage gold coupon bonds. The bonds are due October 1, 1939, and are to be extended for five years to October 1, 1944, at an interest rate of five per cent.

MISSOURI SOUTHERN.—Dismissal of R. F. C. Loan Application.—Division 4 of the Interstate Commerce Commission has dismissed, at the request of this company, its application for a loan of \$55,000 from the Reconstruction Finance Corporation.

MOUND CITY & EASTERN.—Abandonment.—Allen S. Trux, the present owner, has applied to the Interstate Commerce Commission for authority to abandon the entire line of this road extending from Long Lake, S. Dak., to Leola, 19.02 miles.

NEW JERSEY & NEW YORK.—Abandonment.—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a portion of a branch line extending from Nanuet, N. Y., to New City, 4.1 miles.

NEW YORK CENTRAL.—Abandonment.—This road has applied to the Interstate Commerce Commission for authority to abandon its 19.2-mile line between Phoenixia, N. Y., and Kaaterskill, and the 2.7-mile off-shoot from Kaaterskill Junction and Hunter.

NORTHERN PACIFIC.—Abandonment.—This road has applied to the Interstate Commerce Commission for authority to abandon 1.46 miles of switching track used to serve mines on Butte Hill, Butte, Mont.

Average Prices of Stocks and Bonds

	June 6	Last week	Last year
Average price of 20 representative railway stocks..	29.44	29.25	21.18
Average price of 20 representative railway bonds..	58.79	59.21	55.74

Dividends Declared

Alabama Great Southern.—Ordinary, \$3.00; Preferred, \$3.00, both payable June 28 to holders of record June 9.
Dayton & Michigan.—8 Per Cent Preferred, \$1.00, quarterly, payable July 5 to holders of record June 16.
West Jersey & Seashore.—\$1.50, semi-annually, payable July 1 to holders of record June 15.

Railway Officers

EXECUTIVE

J. L. Lancaster, president of the Texas & Pacific, with headquarters at Dallas, Tex., has been elected also chairman of the board.

B. G. Parker has been elected president of the Youngstown & Suburban, with headquarters at Youngstown, Ohio, succeeding **W. E. Fowler**, who has resigned. **Lloyd Lyon**, general superintendent and traffic manager, has been elected vice-president and director.

Carl Howe, vice-president on the Erie, with headquarters at Chicago, has been appointed vice-president in charge of traffic, with headquarters at Cleveland, Ohio, succeeding **David L. Gray**, who has been appointed consulting vice-president. **W. V. Kennedy**, assistant freight traffic manager, with headquarters at Chicago, has been promoted to assistant vice-president in charge of solicitation, with the same headquarters, and **L. B. Burford**, freight traffic manager, has been appointed assistant vice-president in charge of freight rates and divisions, with headquarters as before at Cleveland. The position of assistant freight traffic manager at Chicago has been abolished, and the position of freight traffic manager heretofore held by Mr. Burford has been abolished.

David L. Gray, vice-president in charge of traffic of the Erie, with headquarters at Cleveland, Ohio, after 53 years of active railroad service, has, at his own request, been relieved of the duties of that position and has been appointed consulting vice-president, with headquarters at New York. Mr. Gray was born on October 1, 1870, and shortly after his graduation from the public schools, entered the service of the Erie in 1886 as a clerk in the presi-

which position he held until April, 1909, when he became assistant freight traffic manager. Mr. Gray remained in that position until September, 1915, when he was promoted to assistant general traffic manager. From March to October, 1918, he was manager of inland traffic for the United States Shipping Board Emergency Fleet Corporation, Washington, D. C. In November, 1918, he was appointed staff assistant to the Eastern regional director, United States Railroad Administration, New York, later becoming traffic assistant to the regional director of that region. When the railroads were returned to private control, Mr. Gray became assistant traffic manager for the New York Central, but on August 1, 1925, returned to the Erie as vice-president in charge of traffic.

Newton A. Williams, general manager of the Eastern district of the Union Pacific, with headquarters at Omaha, Neb.,



Newton A. Williams

has been elected vice-president in charge of operations of the system, succeeding **Howard C. Mann**, who has retired because of physical disability, and **Otto Jabermann**, assistant to the president, in charge of research, with headquarters at Omaha, has been elected vice-president in charge of research and mechanical standards, with the same headquarters, a newly created position. Mr. Williams was born on a farm near Laclede, Mo., on March 29, 1878, and worked on his father's farm until he was 20 years of age. In July, 1888, he became a section hand on the Hannibal & St. Joseph (now part of the Chicago, Burlington & Quincy) and a few months later he entered train service on the same road as a brakeman. In January, 1902, he went with the Denver & Rio Grande as a brakeman and the following year he was advanced to conductor. Mr. Williams was promoted to assistant superintendent of the Salt Lake division, with headquarters at Salt Lake City, Utah, in August, 1909, and a year later he was advanced to superintendent of that division. In March, 1912, he was transferred to the Green River division, with headquarters at Helper, Utah, and two years later he resigned to engage in business. In 1916, he returned to railroad service as a trainmaster on the Union Pacific at Grand Island, Neb., and the following year he was promoted to assistant superintendent's office. He held various positions in the general freight department of that road until August 1, 1904, when he became division freight agent at Elmira, N. Y. The following year he became assistant general freight agent at New York,



Kaiden

David L. Gray

ent at Kansas City, Mo.; in 1918, he was advanced to superintendent of the Western division, with headquarters at Green River, Wyo. In 1922, Mr. Williams was



Otto Jabelmann

transferred to the Wyoming division and a short time later he was appointed general superintendent of the Los Angeles & Salt Lake, with headquarters at Los Angeles, Cal. In 1925, he was transferred to the Northern district of the Union Pacific, with headquarters at Cheyenne, Wyo., and on October 31, 1928, he was promoted to general manager, with headquarters at Omaha.

Mr. Jabelmann was born at Cheyenne, Wyo., on July 24, 1890, and entered railway service as a call boy for the Union Pacific on September 22, 1906. He has been continuously in the service of the Union Pacific since that time with the exception of three years during which he attended the University of Michigan and a period from May to August, 1917, when he was a machinist on the Southern Pacific at San Francisco. He advanced through the mechanical department, serving successively as apprentice, machinist helper, machinist and assistant enginehouse foreman at Cheyenne, general foreman at Laramie, Wyo., machinist at North Platte, Neb., enginehouse foreman, district foreman and superintendent of shops at Cheyenne. On January 1, 1929, he was transferred to Omaha as superintendent of shops and in October, 1933, he was advanced to general superintendent of motive power and machinery at Omaha. He was appointed assistant to the president in charge of research, in November, 1937. He has been in charge of the designing of the new steam electric locomotive recently delivered the Union Pacific, the new Diesel-electric locomotives on the streamliners, City of Los Angeles, City of San Francisco and City of Denver, the new truck improvements used on lightweight freight cars and new lighting and air-conditioning equipment.

FINANCIAL, LEGAL AND ACCOUNTING

Ben C. Dey, general counsel of the Southern Pacific Lines, with headquarters at New York, has had his headquarters transferred to San Francisco, Cal. **C. W. Durbrow**, assistant general solicitor, with

headquarters at San Francisco, has been promoted to general solicitor, with headquarters at that point, succeeding **Guy V. Shoup** and the office of assistant general solicitor has been abolished.

James F. Quirk has been appointed auditor of the Chicago, Attica & Southern, with headquarters at Attica, Ind., succeeding **Harry A. Butt**, whose death on May 9, is announced elsewhere in these columns.

E. G. Kennedy has been appointed freight claim agent of the Frankfort & Cincinnati, with headquarters at Frankfort, Ky., succeeding **C. B. Gorman**, who has resigned.

R. J. Lascelles, assistant treasurer of the Pullman Company, has been elected treasurer, with headquarters at Chicago, succeeding **H. A. Brown**, who has retired after 52 years continuous service, and **B. H. Slade**, a clerk in the financial department, has been appointed assistant treasurer replacing Mr. Lascelles.

Edmond F. Browder, whose promotion to secretary and treasurer of the Panhandle & Santa Fe, with headquarters



Edmond F. Browder

at Amarillo, Tex., was announced in the *Railway Age* of May 13, was born at Canadian, Okla., on October 25, 1892, and attended business college at Ft. Smith, Ark. For a time he worked for Armour & Company at various points, becoming cashier at Sherman, Tex. On May 1, 1916, he entered railway service as a clerk in the auditor's office of the Panhandle & Santa Fe at Amarillo and in November of that year he was transferred to the office of the secretary and treasurer. In July, 1918, he was promoted to cashier in the same office, the position he held until his recent promotion, which was effective June 1.

J. E. Bertelsen, freight auditor of the Minneapolis, St. Paul & Sault Ste. Marie, and of the Duluth, South Shore & Atlantic, has been appointed auditor of revenues of these roads, with headquarters as before at Minneapolis, Minn., relieving **B. Newhouse**, who has retired. The position of freight auditor has been abolished.

The jurisdiction of **H. F. Lohmeyer**, secretary and treasurer of the Chesapeake & Ohio and the Pere Marquette, with headquarters at Cleveland, Ohio, has been

extended to include the New York, Chicago & St. Louis (Nickel Plate), and **R. G. Eberly**, treasurer of the Nickel Plate has been appointed assistant treasurer, with headquarters as before at Cleveland.

Joseph N. Freeman, whose retirement on June 1 as secretary-treasurer of the Panhandle & Santa Fe, with headquarters at Amarillo, Tex., was announced in the *Railway Age* of May 13, was born at Liverpool, Nova Scotia, on June 22, 1865, and entered railway service as a clerk on the Atchison, Topeka & Santa Fe in August, 1888, at Topeka, Kan. The following year he was transferred to the office of the general superintendent, and in April, 1890, he was transferred to the Southern Kansas railway (now the Panhandle & Santa Fe) at Panhandle, Tex. In May, 1892, he was appointed acting auditor and a year later he was promoted to auditor. Mr. Freeman was elected treasurer in June, 1906, and in November, 1907, he was also elected treasurer. In 1914, when the Southern Kansas became the Panhandle & Santa Fe, he continued as secretary-treasurer, holding that position until his retirement on June 1.

OPERATING

H. P. Dunlap, chief clerk to the general manager of the Eastern Lakes department of the Railway Express Agency at Cleveland, Ohio, has been promoted to superintendent of the Northern Ohio division, with the same headquarters, succeeding **Walter H. Tummonds**, who has been transferred to the Eastern Michigan division, with headquarters at Detroit, Mich., relieving **Timothy G. Hives**, who has retired.

R. W. Rogers, assistant general manager of the Northern district of the Seaboard Air Line, with headquarters at Savannah, Ga., has been promoted to a newly-created position of the same title with system jurisdiction, at Norfolk, Va. A photograph of Mr. Rogers and a biographical sketch of his railway career were published in the *Railway Age* of May 21, 1938. **C. H. Sauls**, superintendent of the South



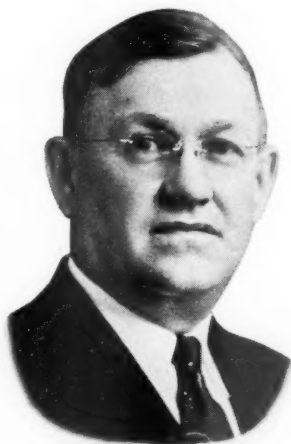
C. H. Sauls

Carolina division at Savannah, has been appointed assistant general manager of the Northern district, with the same headquarters, succeeding Mr. Rogers. **J. C. Hy-**

man, trainmaster of the Virginian division at Richmond, Va., has been appointed superintendent of the North Carolina division, with headquarters at Hamlet, N. C., succeeding **John White**, who has been transferred to the South Carolina division at Savannah, succeeding Mr. Sauls. **H. S. Leard, Jr.**, assistant to division engineer at Savannah, has been appointed assistant trainmaster of the South Florida division at Arcadia, Fla., succeeding **C. H. Lineberger, Jr.**, who has been appointed trainmaster of the North Carolina division at Hamlet, to succeed **J. W. Smith**, who has been transferred to Richmond, replacing Mr. Hyman.

Mr. Sauls was born in Raleigh, N. C., and entered the service of the Seaboard Air Line in 1906. He served successively as operator, train dispatcher, chief dispatcher and trainmaster. For the past 16 years Mr. Sauls has served as superintendent, having his headquarters in Savannah since 1934.

Charles P. Cahill, acting general superintendent of the Eastern district of the Union Pacific, with headquarters at Omaha, Neb., has been promoted to general manager of that district, with the same headquarters, succeeding **Newton A. Wil-**



Charles P. Cahill

liams, whose election to vice-president in charge of operations is announced elsewhere in this issue, and **Fred C. Paulsen**, superintendent of the Idaho division, with headquarters at Pocatello, Ida., has been advanced to general superintendent of the South-Central district, with the same headquarters, a newly created position. **R. E. Titus**, assistant superintendent of the Idaho division, has been promoted to superintendent of that division to replace Mr. Paulsen.

Mr. Cahill was born at Lyndonville, Vt., on April 23, 1886, and entered railway service on September 1, 1899, as a call boy on the St. Joseph & Grand Island (a part of the Union Pacific System). He later served as a telegraph operator, train dispatcher and chief dispatcher. In 1917, he was appointed rules examiner and later the same year he was promoted to trainmaster. On August 23, 1930, he was advanced to assistant superintendent at Denver. Mr. Cahill was appointed acting superintendent at Denver, on December 20, 1934, and a few months later was pro-

moted to superintendent at that point. In July, 1936, he was transferred to Kansas City, Mo., and in March, 1939, he was ap-



Fred C. Paulsen

pointed acting general superintendent, Eastern district, at Omaha.

Mr. Paulsen was born at Omaha, Neb., and entered the service of the Union Pacific in May, 1903, as a shop messenger in the mechanical department, later being transferred to the engineering department, where he served as a rodman, instrumentman, draftsman, assistant engineer, office engineer and roadmaster at Manhattan, Kan., and division engineer at Cheyenne, Wyo. In 1926, Mr. Paulsen was promoted to assistant superintendent, with headquarters at Pocatello, Ida., and in 1936 he was promoted to superintendent, with the same headquarters.

TRAFFIC

Allan Donaldson, traffic agent for the Chicago Great Western at San Francisco, Cal., has been promoted to general agent at Salinas, Cal., a newly created position.

W. A. Angrick, commercial agent on the New York, Chicago & St. Louis at Ft. Wayne, Ind., has been promoted to general agent at Michigan City, Ind., a newly created position.

W. L. Kendall, general dairy agent of the Erie, with headquarters at Chicago, has been relieved of active duty, but will continue as special representative of the dairy department at Chicago.

S. O. Neyman, commercial agent on the Columbus & Greenville, at Greenville, Miss., has been promoted to general agent at Birmingham, Ala., a newly created position.

John T. Garrigues, assistant general agent on the Kansas City Southern at Ft. Smith, Ark., has been promoted to general agent at that point, succeeding **H. N. Hall**, who retired on June 1, after 44 years of service.

J. M. Macrae, general freight agent of the Canadian National at Vancouver, B. C., has been promoted to assistant freight traffic manager, with headquarters at Winnipeg, Man., succeeding **J. M. Horn**, whose promotion to traffic manager,

foreign freight department, with headquarters at Montreal, Que., was announced in the *Railway Age* of May 20, and **W. Hately**, general freight agent at Winnipeg, has been transferred to Vancouver, replacing Mr. Macrae. **L. A. Fonger**, division freight agent at Edmonton, Alta., and **G. N. McMillan**, have been appointed assistant general freight agents at Winnipeg.

R. E. O'Grady, manager perishable freight traffic of the Erie, has been appointed manager perishable and dairy traffic, with headquarters at Pier 20, North River, New York. The position formerly held by Mr. O'Grady has been abolished.

Davis Lambright has been appointed general agent for the Chicago, Springfield & St. Louis at Dallas, Tex., and **W. M. Brown** has been appointed general agent at Mobile, Ala., two newly created positions.

F. H. Ball, general freight and passenger agent of the Fernwood, Columbia & Gulf, has been appointed executive general agent, with headquarters as before at Tylertown, Miss., and **E. D. McLean**, commercial agent at Columbia, Miss., has been promoted to general freight agent at that point, a newly created position.

H. W. Von Willer, assistant freight traffic manager of the Erie, with headquarters at Cleveland, Ohio, has been appointed freight traffic manager, Western territory, solicitation, with headquarters at Chicago, a newly created position, and **E. J. Dean**, assistant to the vice-president in charge of purchases and development, with headquarters at Cleveland, Ohio, has been appointed freight traffic manager, Central territory, solicitation, with the same headquarters, also a newly created position. A photograph of Mr. Von Willer, accompanied by a sketch of his railroad career, was published on page 267 of the *Railway Age* of August 13, 1938, at the time of his promotion to assistant freight traffic manager.

Mr. Dean was born at Lowell, Mass., on March 8, 1896. He entered railway service with the Boston & Main on Feb-



E. J. Dean

ruary 15, 1915, but left that company to go with the Erie as chief clerk to the New England freight and passenger agent at

Boston, Mass. He became junior commercial agent on July 1, 1922, and was promoted to senior commercial agent in June, 1925. He was appointed division freight agent at Dayton, Ohio on August 15, 1927, and in April of the following year was appointed industrial agent at Chicago. He returned to Boston on January 1, 1929, as New England freight and passenger agent, and became general New England agent there on March 15, 1937. Mr. Dean was promoted to assistant to the vice-president, with headquarters at Cleveland, in March, 1938.

I. C. Bruce, general agent, passenger department, on the Chicago, Rock Island & Pacific at Minneapolis, Minn., has been promoted to assistant general passenger agent in charge of solicitation at Chicago, and **V. T. Corbett**, chief clerk in the passenger traffic department at Chicago, has been advanced to assistant general passenger agent at that point. **C. C. Gardner**, general agent, passenger department at Des Moines, Iowa, has been promoted to assistant general passenger agent at that point, a newly created position, and **J. H. Clarkson**, district freight and passenger agent at Indianapolis, Ind., has been advanced to general agent, passenger department at Minneapolis, succeeding Mr. Bruce.

Burt L. Gartside, whose promotion to general passenger agent on the Chicago, Burlington & Quincy, with headquarters at Chicago, was announced in the *Railway Age* of May 20, was born at Topeka, Kan.,



Burt L. Gartside

on September 23, 1894, and entered railway service on February 22, 1911, as a clerk in the passenger department of the Atchison, Topeka & Santa Fe at Topeka. In March, 1914, he went with the Burlington as a clerk in the advertising department at Chicago, later becoming successively cashier and ticket teller in the city ticket office. In June, 1919, after service in the U. S. Army during the war, he returned to his position as ticket teller at Chicago and on January 1, 1926, he was appointed passenger agent. In June, 1927, he was advanced to city passenger agent and in September, 1935, he was promoted to general agent, passenger department, at Kansas City, Mo. Mr. Gartside was trans-

ferred to Detroit, Mich., two years later as general agent, freight and passenger departments, and in March, 1938, he was advanced to assistant general passenger agent at Chicago, the position he held at the time of his recent promotion.

Harold F. Eno, whose promotion to general passenger agent on the Denver & Rio Grande Western, with headquarters at Denver, Colo., was announced in the *Railway Age* of May 20, was born at



Harold F. Eno

Durango, Colo., on August 30, 1903, and entered railway service on April 1, 1921, in the freight accounting department at Denver. Three years later he became a clerk in the general manager's office and on June 1, 1926, he was appointed secretary to the superintendent of transportation, later becoming successively secretary to the assistant general manager and secretary to the vice president in charge of traffic. Mr. Eno was promoted to chief clerk in the freight traffic department on June 1, 1935, and on January 1, 1937, he was advanced to chief clerk to the general traffic manager, the position he held at the time of his recent promotion.

ENGINEERING AND SIGNALING

W. H. Barnard, assistant bridge engineer of the Southern, with headquarters at Washington, D. C., has been appointed bridge engineer, succeeding **M. R. Strong**, deceased. **O. B. Robbins**, assistant engineer at Washington, has been appointed assistant bridge engineer, succeeding Mr. Barnard.

L. T. Nuckols, division engineer of the Ashland division of the Chesapeake & Ohio, with headquarters at Ashland, Ky., has been appointed engineer of track, with headquarters at Richmond, Va., succeeding **A. W. White**, whose appointment as general tie and timber agent at Cleveland, Ohio, was noted in the *Railway Age* of May 6.

MECHANICAL

S. C. Smith, master mechanic on the Union Pacific, with headquarters at Pocatello, Idaho, has been promoted to assistant general superintendent of motive power and machinery of the Western dis-

tricts, with the same headquarters, succeeding **John Gogerty**, who has been transferred to the Eastern district, with headquarters at Omaha, Neb.

C. F. Spicka, who has been acting assistant general superintendent of motive power and machinery, Eastern district, with headquarters at Omaha, has returned to his former position as superintendent of shops at Cheyenne, succeeding **R. E. Wees**, who has been promoted to master mechanic at Pocatello, replacing Mr. Smith.

W. R. Harrison, superintendent of shops on the Atchison, Topeka & Santa Fe at Albuquerque, N. M., has been promoted to mechanical superintendent, with headquarters at Amarillo, Tex., succeeding **E. E. Machovec**, who retired on June 1, and **G. R. Miller**, master mechanic at Clovis, N. M., has been advanced to superintendent of shops at Albuquerque relieving Mr. Harrison. **P. J. Danneberg**, master mechanic at Slaton, N. M., has been transferred to Clovis, replacing Mr. Miller and **L. E. Fletcher**, master mechanic at La Junta, Colo., has been transferred to Slaton, succeeding Mr. Danneberg. Mr. Machovec was born on March 26, 1866, and entered railway service in 1885, as a machinist apprentice on the Chicago, St. Paul, Minneapolis & Omaha. In 1904, he went with the Denver & Rio Grande Western at Helper, Utah, and the following year he went with the Santa Fe as roundhouse foreman at Newton, Kan. In 1908 he was promoted to general foreman at that point and in the fall of that year he was advanced to master mechanic at Newton. Mr. Machovec was transferred to Argentine, Kan., in 1911, and from November, 1921, to March, 1922, he served as acting mechanical superintendent of the Northern district, Western lines, with headquarters at La Junta, Colo. In September, 1922, he was promoted to mechanical superintendent of the Southern district, with headquarters at Amarillo, the position he held at the time of his retirement.

Mr. Harrison began railway service as a machinist apprentice on the Southern at Princeton, Ind., and on April 1, 1912, he went with the Santa Fe as a machinist at Richmond, Cal., being transferred to Topeka, Kan., a short time later. In November, 1912, he was promoted to night roundhouse foreman at Argentine, Kan., and in 1914, he was advanced to general foreman at Newton, Kan. Mr. Harrison was promoted to master mechanic at Chanute, Kan., in November, 1917, and until February 1, 1934, served as master mechanic or acting master mechanic at Argentine and Chanute. On the latter date he was advanced to superintendent of shops at Albuquerque, N. M., the position he held until his recent promotion to mechanical superintendent.

Edward E. Root, whose appointment as assistant chief of motive power of the Delaware, Lackawanna & Western at Scranton, Pa., was noted in the *Railway Age* of May 27, was born at Altoona, Pa., and educated in the public and high schools of that city. He entered railroad service

LIMA POWER AT WORK



One of the modern 2-8-2's built by Lima for the Louisiana & Arkansas Ry. Co.

MODERN POWER earns more and costs less

Modern power, without increasing wheel loads, is more economical in fuel, handles more cars faster, is easier on track and bridges, costs far less for maintenance and is available for more service hours per day.

In any service, today's high standard of train operation can be maintained at the lowest possible cost only by utilization of modern steam power.

LIMA LOCOMOTIVE WORKS



INCORPORATED, LIMA, OHIO

in September, 1902, as a machinist's apprentice in the Altoona works of the Pennsylvania, following which he completed the four-years' course of mechanical instruction, road, operation and testing of equipment. In December, 1906, Mr. Root was assigned to special duty in the mechanical,



Edward E. Root

maintenance and operating departments. He was appointed motive power inspector in December, 1907, on the staffs of the master mechanic and superintendent of motive power. In December, 1908, Mr. Root was appointed engine house foreman of the Monongahela division and general foreman of engine operations at Monongahela City, Pa. In September, 1913, he was promoted to master mechanic and superintendent of motive power of the Monongahela railway at Brownsville, Pa. After resigning in April, 1920, to engage in business at Pittsburgh, Pa., Mr. Root re-entered railroad service with the Delaware, Lackawanna & Western in December, 1923, as master mechanic, in which capacity he was serving on the Morris and Essex division at Hoboken, N. J., at the time of his recent appointment.

PURCHASES AND STORES

John M. Paulus, whose promotion to general storekeeper of the Nashville, Chattanooga & St. Louis, with headquar-



John M. Paulus

ters at Nashville, Tenn., was announced in the *Railway Age* of May 20, was born at

Nashville, Tenn., on July 5, 1892, and entered railway service on the N. C. & St. L. on April 1, 1909, as a laborer in the stores department, later being promoted to receiving clerk. He later transferred to the purchasing department, serving as invoice clerk and order clerk. During the war he enlisted in the U. S. Navy. He returned to the N. C. & St. L. in October, 1919, and shortly thereafter, was promoted to chief clerk in the purchasing department, the position he held at the time of his recent promotion.

SPECIAL

A. G. Moody, chief clerk to the manager of personnel of the Illinois Central at Chicago, has been promoted to supervisor of personnel, with the same headquarters, a newly created position, and **F. F. Lynch**, chief clerk to the master mechanic at Paducah, Ky., has been appointed personnel agent at Chicago, also a newly created position.

OBITUARY

John S. Ekey, engineer of bridges and buildings of the Bessemer & Lake Erie, with headquarters at Greenville, Pa., died in that city on June 3.

H. R. Harris, vice-president and general manager of the Lake Superior & Ishpeming, with headquarters at Marquette, Mich., died in that city on June 5 of a heart ailment.

W. E. Wood, who retired on May 1, 1938, as assistant engineer on the Chicago, Milwaukee, St. Paul & Pacific at Chicago, died suddenly at the age of 79, on June 7 at his home in Oak Park, Ill. Mr. Wood had been ill for more than a year.

Harry A. Butt, secretary and auditor of the Chicago, Attica & Southern, with headquarters at Attica, Ind., died suddenly at that point on May 9. Mr. Butt had been auditor of the C. A. & S. since May 15, 1923, and before that had been auditor of station accounts for the Chicago, Terre Haute & Southeastern (now part of the Chicago, Milwaukee, St. Paul & Pacific).

Ben B. Shaw, who resigned as division engineer on the Chicago, Rock Island & Pacific, with headquarters at Little Rock, Ark., in November, 1922, to become chief engineer of the Cuba Railway, died of a heart ailment at Macon, Ga., on June 3, at the age of 53. Mr. Shaw, at the time of his death, was manager of the Georgia Kaolin Company's plant at Dry Branch, Ga.

Raymond M. Flocker, general passenger agent of the Central region of the Pennsylvania, with headquarters at Pittsburgh, Pa., died suddenly of apoplexy on June 2 at his home in Aspinwall, Pa., at the age of 48. Mr. Flocker was born in Millvale, Pa., on January 4, 1891, and attended Caton Technical School. He entered the service of the Pennsylvania in 1908 as a clerk in the passenger department and two years later became an assistant ticket stock clerk. In 1913 he was

promoted to assistant division clerk and in 1916 became traveling baggage agent. Four years later he was appointed special clerk in the passenger department, then becoming chief clerk. Mr. Flocker was appointed division passenger agent in 1925, and the following year was promoted to assistant general passenger agent of the Central region. Two years later he was transferred to Philadelphia, but returned to Pittsburgh in 1929 as passenger traffic manager. He was appointed general passenger agent of the Central region on June 1, 1932, the position he held until his death.

William S. Burley, who resigned in the fall of 1918 as assistant land and industrial commissioner of the Chicago, Burlington & Quincy, Lines East of the Missouri river, with headquarters in Chicago, died following a heart attack on June 5, in the Jefferson Park Hospital in Chicago. Mr. Burley, after leaving the Burlington, later served as manager of the real estate department of the Old Ben Coal Corporation.

John E. Reilly, general superintendent of the Elgin, Joliet & Eastern, with headquarters at Joliet, Ill., died in St. Joseph's hospital in that city on June 1. Mr. Reilly was born at Odell, Ill., on March 1, 1874, and entered railway service on April 1, 1892, as a brakeman on the E. J. & E. A year later, he was promoted to conductor and in November, 1911, he was advanced to assistant trainmaster. Mr. Reilly was promoted to trainmaster in October, 1916, and to superintendent of the Joliet division, with headquarters at Joliet, in February, 1927. He was advanced to general superintendent, the position he held at the time of his death, on January 1, 1931.

William Grant Smith, who retired on August 17, 1931, as vice-president in charge of the Southern departments of the American Railway Express Company and the Railway Express Agency, with headquarters at Atlanta, Ga., died at his home in Cleveland, Ohio, on April 23. Mr. Smith was born at Fox Lake, Wis., on August 24, 1861, and began his career in 1879 as a clerk for the American Express Company in Milwaukee, Wis. After filling various positions in agency service and as route agent, with headquarters in Milwaukee, he was promoted to superintendent at that point in 1892. A few years later he was transferred to Detroit, Mich., and shortly thereafter he was advanced to general superintendent, with headquarters at Omaha, Neb. Mr. Smith was appointed assistant to the vice-president and general manager, with headquarters at Chicago in 1906, and four years later he was appointed manager of the Central departments, with headquarters at Cleveland. In 1917, he was sent to the Orient to survey the possibilities of expanding express transportation in the Far East, returning a year later. With the consolidation of the express companies on July 1, 1918, Mr. Smith was made general manager of the Eastern Lakes department, with headquarters as before at Cleveland, and in 1921 he was appointed vice-president in charge of the Southern departments, the position he held at the time of his retirement.



*Trade Mark Registered United States Patent Office

To haul its train efficiently the locomotive must have tractive effort adequate to start the train and to accelerate quickly to road speeds. It must have ample horsepower capacity to maintain the desired schedules.

The first factor is one of cylinder capacity and adhesive weight — the second, primarily one of boiler capacity.

By providing ample boiler capacity together with cylinders capable of developing the needed horsepower in the fundamental design, and utilizing the added tractive effort of The Locomotive Booster* for starting and accelerating, a smaller, lighter locomotive can be made to do the same work as a locomotive in the next class above.

In this way every pound of locomotive weight is made effective and the lighter unit will cost correspondingly less to operate and to maintain.

The Booster capitalizes idle weight and spare steam.



Because material and tolerances are just right for the job, genuine Franklin repair parts give maximum service life.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK

CHICAGO

MONTREAL

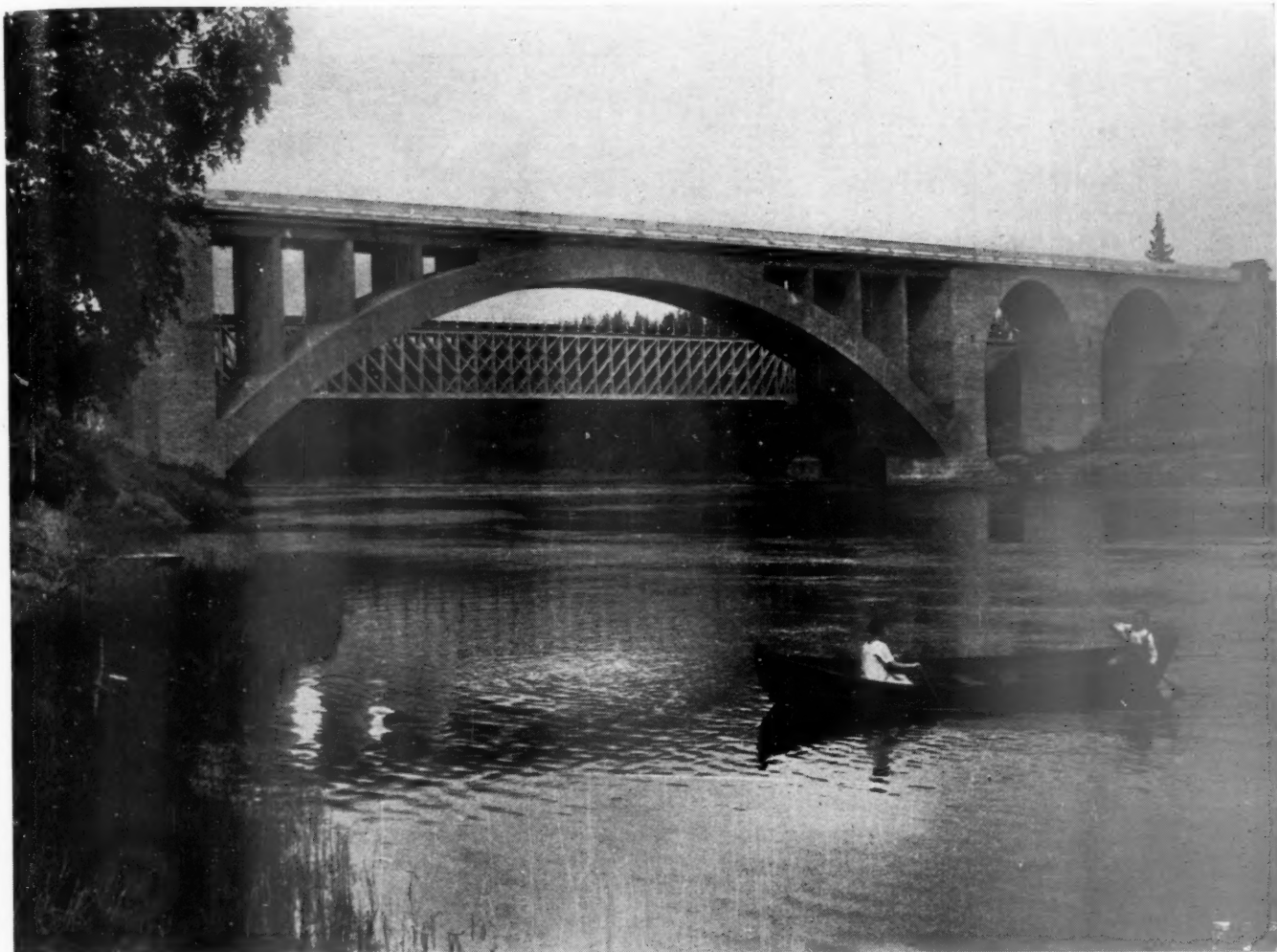
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1939

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Way and structures	Maintenance of equipment	Traffic			Operating income	1939
Akron, Canton & Youngstown.....	171	\$136,877	\$34	\$136,911	\$22,534	\$22,534	\$13,901	77.5	\$32,268	\$19,735	\$1,123
Alton	171	611,562	144	611,706	69,604	69,604	206,150	71.8	180,581	125,502	54,082
Alton	959	832,991	192,457	1,025,448	214,531	192,078	50,524	86.2	168,334	76,798	91,536
Alton	959	3,111,086	797,758	3,908,844	718,863	192,078	174,937	81.6	889,045	501,029	388,016
Atchison, Topeka & Santa Fe System.....	13,465	8,983,810	1,243,398	10,227,208	1,727,331	2,818,413	4,510,432	87.2	1,451,467	287,335	230,192
Atlanta & West Point.....	13,470	34,863,252	5,000,440	39,863,692	6,236,159	11,258,654	17,971,967	87.8	5,348,233	521,173	222,524
Atlanta & West Point.....	93	91,430	24,384	115,814	19,862	19,862	61,024	89.3	14,909	10,552	4,357
Atlanta & West Point.....	93	386,087	91,452	477,539	68,046	103,946	32,070	88.3	66,519	27,942	38,577
Western of Alabama.....	133	103,720	23,371	127,091	20,003	27,500	7,699	78.7	31,408	18,021	13,387
Atlanta, Birmingham & Coast.....	133	390,483	89,805	480,288	73,532	115,395	32,138	85.3	83,223	28,196	55,027
Atlanta, Birmingham & Coast.....	639	242,876	46,475	289,351	42,051	45,479	24,001	87.4	35,330	12,524	22,806
Atlanta, Birmingham & Coast.....	639	1,033,541	140,483	1,174,024	174,227	195,894	96,422	81.7	231,136	138,884	92,252
Atlantic Coast Line.....	5,107	3,321,364	767,713	4,089,077	389,683	702,533	1,413,353	67.7	1,476,972	876,972	583,260
Atlantic Coast Line.....	5,108	13,023,044	3,639,634	16,662,678	1,682,096	2,950,150	6,657,782	69.7	5,649,664	3,499,664	2,149,250
Atlantic Coast Line.....	343	181,392	997	182,391	33,728	31,038	7,386	72.9	50,778	25,778	25,000
Atlantic Coast Line.....	343	778,940	3,190	782,130	99,230	114,682	33,865	67.1	263,072	163,072	100,000
Baltimore & Ohio.....	6,399	8,639,919	817,720	9,457,639	1,172,794	2,518,480	400,387	87.5	1,276,030	418,241	11,044
Baltimore & Ohio.....	6,403	39,568,464	3,024,200	42,592,664	3,857,844	10,325,415	1,498,055	78.6	9,721,521	6,225,504	4,967,712
Baltimore & Ohio.....	24	54,782	70,690	125,472	10,846	20,670	4,476	91.8	11,070	17,387	6,317
Baltimore & Ohio.....	24	206,886	292,648	499,534	47,110	83,032	33,767	96.4	19,441	94,803	75,362
Bangor & Aroostook.....	603	512,024	17,269	529,293	89,037	80,475	4,256	61.5	211,050	159,128	51,922
Bangor & Aroostook.....	603	2,270,980	68,599	2,339,579	355,587	351,927	21,497	58.6	1,000,196	763,783	236,413
Bangor & Aroostook.....	224	415,655	631	416,286	93,309	263,952	12,414	125.6	109,359	155,481	45,128
Bangor & Aroostook.....	224	1,767,243	2,575	1,769,818	327,112	1,020,295	52,802	115.4	279,930	467,714	187,784
Boston & Maine.....	1,939	2,609,276	521,467	3,130,743	474,672	581,404	55,554	76.9	859,826	555,915	303,911
Boston & Maine.....	1,948	10,544,234	2,267,285	12,811,519	1,674,703	2,777,449	241,630	74.7	3,738,700	2,523,742	1,214,958
Boston & Maine.....	255	71,351	16,839	88,190	4,907	7,672	4,951	115.6	14,954	23,169	8,215
Boston & Maine.....	255	299,443	65,066	364,509	59,169	75,241	18,419	102.0	7,952	41,076	33,124
Cambria & Indiana.....	37	7,803	.....	7,803	4,478	38,709	404	704.63	47,681	53,072	5,391
Canadian Pacific Lines in Maine.....	37	431,822	.....	431,822	22,016	164,658	1,655	60.02	172,809	57,722	29,214
Canadian Pacific Lines in Maine.....	234	218,647	16,920	235,567	21,512	34,959	38,293	60.1	98,827	88,429	10,400
Canadian Pacific Lines in Maine.....	234	960,699	58,342	1,019,041	90,483	167,693	33,527	63.0	394,485	351,389	43,096
Canadian Pacific Lines in Vermont.....	91	66,097	7,476	73,573	13,848	21,037	3,685	117.1	14,194	21,569	7,375
Canadian Pacific Lines in Vermont.....	91	236,527	37,241	273,768	48,277	94,042	15,698	132.4	101,639	129,341	27,692
Canadian Pacific Lines in Vermont.....	1,871	996,097	92,307	1,088,404	168,219	271,864	52,554	90.4	119,348	7,642	111,706
Canadian Pacific Lines in Vermont.....	1,871	4,037,122	410,228	4,447,350	661,258	1,077,935	209,000	88.4	590,937	144,655	445,282
Central of New Jersey.....	711	2,229,780	338,255	2,568,035	260,991	521,356	46,983	74.2	708,212	274,902	105,198
Central of New Jersey.....	712	8,312,424	1,331,766	9,644,190	947,819	2,035,410	4,398,395	76.7	2,411,306	832,105	136,091
Central of New Jersey.....	430	401,350	28,130	429,480	63,670	86,098	12,696	80.3	92,656	65,667	26,989
Central of New Jersey.....	430	1,452,691	127,066	1,579,757	255,653	345,366	47,636	89.0	190,387	83,996	106,391
Chesapeake & Ohio.....	3,110	3,809,478	280,716	4,090,194	566,466	1,636,152	1,792,132	102.6	115,447	477,700	601,427
Chesapeake & Ohio.....	3,110	29,338,109	906,030	30,244,139	3,382,115	7,560,447	8,619,132	68.9	9,754,925	6,359,145	3,400,450
Chesapeake & Ohio.....	927	936,427	101,328	1,037,755	148,625	246,155	49,784	84.8	181,484	102,484	79,000
Chesapeake & Ohio.....	927	3,840,660	475,338	4,316,000	580,176	908,852	2,027,164	80.9	945,125	629,125	316,000
Chicago & Illinois Midland.....	131	287,634	1,314	288,948	35,144	67,020	79,233	71.3	88,251	60,952	27,300
Chicago & Illinois Midland.....	131	1,144,014	4,020	1,148,034	121,976	274,129	79,771	72.0	337,541	229,231	108,310
Chicago & Illinois Midland.....	8,372	4,485,059	834,695	5,319,754	1,105,709	1,480,541	1,988,277	95.7	260,541	303,101	42,560
Chicago & Illinois Midland.....	8,380	18,163,468	3,220,986	21,384,454	3,517,594	5,820,769	768,880	92.8	1,734,043	682,245	1,051,798
Chicago, Burlington & Quincy.....	8,931	5,634,682	602,267	6,236,949	1,219,965	1,430,949	270,672	83.8	1,135,760	411,398	43,014
Chicago, Burlington & Quincy.....	8,936	22,753,939	2,477,227	25,231,166	3,208,263	5,711,532	960,211	78.0	6,231,419	3,333,612	1,941,212
Chicago, Burlington & Quincy.....	1,505	1,257,012	42,124	1,299,136	776,318	338,327	1,050,314	77.2	347,208	222,235	125,000
Chicago, Burlington & Quincy.....	1,505	5,079,109	159,697	5,238,806	755,849	945,039	2,229,845	77.7	1,253,921	881,004	372,917
Chicago, Indianapolis & Louisville.....	549	626,099	44,088	670,187	72,681	181,018	30,896	85.6	105,602	70,735	34,867
Chicago, Indianapolis & Louisville.....	549	2,383,290	173,289	2,556,579	310,044	731,831	1,217,31	90.1	278,081	115,536	162,545

Continued on next left-hand page

NO. 91 OF A SERIES OF FAMOUS ARCHES OF THE WORLD



KORJA BRIDGE

FINLAND

This reinforced concrete bridge, built on the main-line between Helsinki and Viipuri, on the Finnish State Railroads, carries heavy passenger and freight trains over the River Kyminjoki near Korja. The middle span is a three-jointed arch having an aperture of 69.10 meters. The side apertures of unjointed arches in ferro-concrete, have a free space of 13.5 meters.

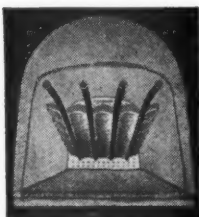
The height in the center of the bridge, from water level to the under side of the bridge, is 17 meters. . . .

The Security Sectional Arch is today an essential element of the modern, high-speed, high-capacity steam locomotive. To realize full economy from your arch be sure it is *complete* before your locomotive leaves the roundhouse.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

**HARBISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**

60 EAST 42nd STREET, NEW YORK, N. Y.

***Locomotive Combustion
Specialists***

**"FUEL IS THE SECOND ITEM OF EXPENSE IN
RAILROAD OPERATION—IT IS SECOND ONLY
TO LABOR. A SAVING OR LOSS OF FUEL
MATERIALLY AFFECTS THE NET REVENUES."**

R. S. TWOGOOD

The Railway Fuel & Travelling Engineers Ass'n. 1938.

20,000 exhaust steam injectors
applied to locomotives through-
out the world are making worth-
while savings in locomotive
fuel costs.



A-1325

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.

60 East 42nd Street, NEW YORK

122 S. Michigan Ave., CHICAGO

Canada: THE SUPERHEATER COMPANY, LTD., MONTREAL

Superheaters • Exhaust Steam Injectors • Feed Waterheaters • American Throttles • Pyrometers • Steam Dryers

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1939—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Maintenance of			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Way and structures	Equip-	Traffic	Trans- portation	Total	1939			1938	
Gulf & Ship Island.....	259	\$99,011	\$4,532	\$114,649	\$21,873	\$15,445	\$2,249	\$52,249	\$95,821	83.6	\$18,828	\$1,981	—\$7,944	—\$12,160
Gulf, Mobile & Northern.....	824	348,349	15,490	402,351	78,697	70,383	9,679	191,859	368,776	91.7	33,751	—33,751	—68,724	—71,731
Gulf, Mobile & Northern.....	824	527,953	17,816	567,966	71,966	84,986	41,412	147,761	380,788	67.0	187,178	140,178	100,195	62,445
Gulf, Mobile & Northern.....	824	1,992,363	70,397	2,154,813	272,227	328,026	161,253	593,640	1,483,444	68.8	671,369	483,369	332,949	192,584
Illinois Central	4,949	6,251,067	683,438	7,860,248	779,314	1,651,404	171,570	3,000,771	5,921,014	75.3	1,939,234	1,235,539	1,082,290	637,318
Illinois Central	4,949	25,158,765	3,018,609	30,780,755	3,023,677	6,580,349	727,274	12,120,468	23,713,481	77.0	7,067,274	4,266,001	3,956,568	3,523,934
Yazoo & Mississippi Valley.....	1,619	863,962	57,330	1,005,221	113,899	162,381	27,068	442,527	790,358	78.6	214,863	77,152	18,179	85,541
Yazoo & Mississippi Valley.....	1,619	3,881,874	212,759	4,408,241	466,691	680,163	113,130	1,848,852	3,286,856	74.6	1,121,385	570,244	326,601	359,225
Illinois Central System.....	6,568	7,115,029	740,768	8,865,469	893,213	1,813,785	198,638	3,443,318	6,711,372	75.7	2,154,097	1,310,635	1,110,881	731,759
Illinois Central System.....	6,568	29,040,639	3,231,368	35,188,996	3,490,368	7,230,512	842,404	13,960,430	27,000,337	76.7	8,188,659	4,828,028	4,321,320	3,922,759
Illinois Terminal.....	481	354,997	61,861	457,456	52,614	69,187	16,831	163,368	319,662	69.88	137,794	96,282	77,870	46,337
Illinois Terminal.....	481	1,390,345	232,317	1,771,966	189,443	286,112	65,089	659,942	1,273,645	71.88	498,321	332,285	269,907	172,950
Kansas City Southern.....	879	892,816	18,500	1,030,435	93,052	155,825	52,551	306,315	668,551	64.9	361,884	262,884	220,533	214,654
Kansas City Southern.....	879	3,685,456	61,306	4,183,175	357,812	614,240	206,225	1,232,202	2,637,969	63.1	1,545,206	1,149,206	979,096	940,393
Kansas, Oklahoma & Gulf.....	327	217,925	342	221,549	35,193	25,775	8,920	45,886	125,278	56.5	96,271	75,682	55,780	29,355
Kansas, Oklahoma & Gulf.....	327	853,116	1,392	865,556	111,396	71,698	35,969	171,356	426,945	49.3	438,611	357,308	284,212	225,012
Lake Superior & Ishpeming.....	156	35,209	67	39,049	15,779	18,546	679	22,626	63,772	163.3	—24,723	—42,496	—63,939	—
Lake Superior & Ishpeming.....	156	103,359	269	109,840	72,045	77,100	2,705	85,599	262,050	238.6	—152,210	—242,173	—271,516	—
Lehigh & Hudson River.....	96	126,462	62	127,204	10,812	19,909	3,468	44,669	85,415	67.1	41,789	26,814	14,815	9,436
Lehigh & Hudson River.....	96	515,038	279	517,954	37,606	86,428	14,760	177,451	342,749	66.2	175,205	113,298	69,822	9,733
Lehigh & New England.....	200	396,126	.....	398,571	34,773	54,201	6,356	111,028	221,788	55.6	176,783	134,937	137,005	55,712
Lehigh & New England.....	200	1,248,447	.....	1,256,940	108,540	227,081	27,251	413,210	840,519	66.9	416,421	304,157	339,387	156,589
Lehigh Valley.....	1,283	3,473,430	169,599	3,877,164	211,483	707,118	108,020	1,611,812	2,758,530	71.1	1,118,634	860,104	688,970	152,742
Lehigh Valley.....	1,283	13,252,432	639,035	14,780,496	788,561	2,603,063	433,148	6,309,728	10,633,736	71.9	4,146,760	3,070,437	2,282,053	551,243
Louisiana & Arkansas.....	606	445,363	8,011	478,256	66,609	70,712	30,503	127,920	311,898	65.2	166,358	122,655	92,632	74,762
Louisiana & Arkansas.....	606	1,813,743	28,365	1,922,951	256,194	287,194	124,814	520,042	1,272,231	66.2	650,720	480,336	383,090	347,374
Louisiana, Arkansas & Texas.....	240	91,320	.....	93,907	19,661	10,208	5,106	31,477	70,918	75.5	22,989	18,633	5,595	—12,176
Louisiana, Arkansas & Texas.....	240	349,960	.....	361,539	78,121	46,101	19,297	130,043	291,635	80.7	69,904	51,646	1,751	—50,513
Louisville & Nashville.....	4,908	4,739,421	481,537	5,773,171	732,305	1,459,270	173,609	2,272,334	4,896,076	84.8	877,095	310,922	238,701	454,043
Louisville & Nashville.....	4,908	22,944,532	1,990,430	26,978,415	3,008,715	6,352,295	748,952	9,727,267	20,917,273	77.5	6,061,142	3,551,778	3,560,492	1,634,708
Maine Central.....	990	794,686	62,249	942,481	145,229	164,547	8,657	251,522	704,402	74.7	238,079	170,577	117,724	67,468
Maine Central.....	1,001	3,521,456	271,132	4,139,625	605,252	708,052	47,572	1,498,314	2,995,920	72.4	1,143,705	874,684	636,238	376,073
Midland Valley.....	352	101,048	.....	102,566	13,989	8,755	2,466	30,722	62,297	60.7	40,269	28,110	22,531	15,008
Midland Valley.....	352	415,712	.....	421,684	44,328	31,610	10,567	118,223	231,127	54.8	190,537	144,522	116,684	68,619
Minneapolis & St. Louis.....	1,524	614,754	8,127	656,921	125,811	132,510	48,751	257,487	602,273	91.7	54,648	6,937	—38,674	—62,521
Minneapolis & St. Louis.....	1,524	2,458,813	31,205	2,626,222	329,773	482,254	188,184	1,066,586	2,197,392	83.7	428,830	257,231	93,291	19,644
Minneapolis, St. Paul & Sault Ste. Marie.....	4,290	1,687,288	64,319	1,906,029	332,777	397,268	65,349	874,035	1,752,851	92.0	153,178	—18,696	—122,926	—139,982
Minneapolis, St. Paul & Sault Ste. Marie.....	4,290	6,291,085	262,014	7,136,067	1,137,617	1,564,594	245,988	3,565,941	6,849,289	96.0	286,778	—408,402	—794,210	—1,102,980
Duluth, South Shore & Atlantic.....	550	122,219	8,579	130,942	30,942	143,872	5,797	80,433	160,867	111.8	—16,995	—32,713	—40,009	—1,439
Duluth, South Shore & Atlantic.....	550	445,922	37,078	532,979	121,498	137,434	21,665	309,645	615,166	115.4	—82,187	—139,033	—156,403	—119,810
Spokane International.....	152	55,196	751	62,709	20,054	7,082	1,918	21,771	55,867	89.1	6,842	10,742	8,335	1,189
Spokane International.....	152	205,222	3,616	235,290	44,451	26,137	8,075	89,701	187,610	79.7	47,680	37,315	28,005	—9,077
Mississippi Central.....	150	60,601	1,625	64,489	11,528	9,817	6,545	18,746	61,743	95.7	2,766	—2,052	—7,094	—13,676
Mississippi Central.....	150	244,052	5,828	258,720	74,817	36,703	28,123	79,579	239,080	92.4	19,640	560	—19,257	—17,156
Missouri & Arkansas.....	365	79,061	1,498	85,781	20,905	9,146	6,302	27,167	68,227	79.5	17,554	13,680	6,059	—13,121
Missouri & Arkansas.....	365	305,008	5,706	339,933	84,331	39,225	24,418	113,528	282,587	83.1	57,346	41,983	13,551	—24,953
Missouri-Illinois.....	193	143,406	378	145,537	27,640	15,147	3,490	46,701	97,065	66.7	97,065	37,088	20,269	7,052
Missouri-Illinois.....	193	620,762	1,426	628,769	84,944	62,386	11,811	185,605	364,710	58.0	264,059	218,707	149,522	10,498
Missouri-Kansas-Texas Lines.....	3,294	1,807,876	167,202	2,208,687	335,000	397,723	111,445	863,898	1,840,971	83.4	367,716	186,186	6,716	—144,422
Missouri-Kansas-Texas Lines.....	3,294	7,167,362	645,000	8,714,667	1,276,752	1,581,965	441,052	3,486,562	7,309,959	83.9	1,404,708	753,152	44,501	—238,544
Missouri Pacific.....	7,173	5,075,253	392,286	6,062,401	1,298,243	1,528,321	242,931	2,429,391	5,271,441	87.0	237,706	37,706	29,234	—110,238
Missouri Pacific.....	7,173	21,423,891	1,522,848	25,216,507	3,547,020	5,338,445	930,885	9,880,366	20,716,970	82.2	4,499,537	2,569,250	1,089,388	538,072
Gulf Coast Lines.....	1,759	1,336,032	36,651	1,441,156	208,102	208,021	43,813	401,724	910,768	63.20	530,388	457,541	340,814	336,969
Gulf Coast Lines.....	1,759	5,763,212	147,228	6,177,025	793,984	790,280	180,466	1,642,139	3,602,087	58.31	2,574,938	2,284,069	1,700,618	1,518,760

Continued on next left-hand page

STEEL

AMERICAN LOCOMOTIVE COMPANY

REVENUES AND EXPENSES OF RAILWAYS

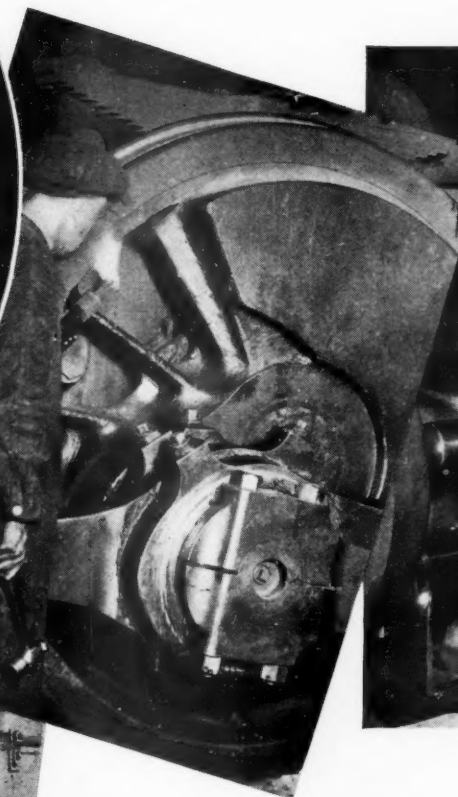
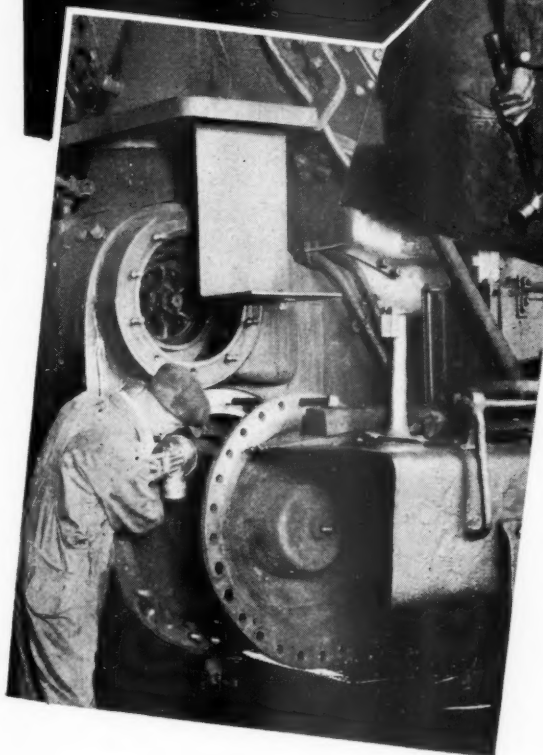
MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1939—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Traffic	Trans- portation			Operating income	1939
International Great Northern.....	1,155	\$774,461	\$61,742	\$937,802	\$150,082	\$27,593	\$437,410	91.8	\$77,232	\$17,648	\$88,287
Mobile & Ohio.....	1,180	3,076,881	285,293	3,362,174	605,924	122,572	1,669,238	90.6	350,830	113,981	236,849
Montreal.....	1,180	926,676	23,559	950,235	149,678	43,052	354,004	76.6	171,216	171,216	171,216
Montreal & St. Lawrence.....	1,180	3,782,370	88,678	3,871,048	563,357	172,930	1,385,845	80.5	737,651	486,793	186,309
Monongahela.....	172	48,776	579	49,355	22,551	491	29,959	136.6	18,641	42,935	54,618
Montour.....	172	1,067,053	2,266	1,069,319	117,156	2,051	267,248	46.5	575,254	469,132	233,614
Nashville, Chattanooga & St. Louis.....	56	20,675	.....	20,675	7,259	967	10,976	248.3	31,786	35,786	1,469
Nevada Northern.....	56	421,229	.....	421,229	32,183	4,069	124,162	78.1	93,731	29,313	151,766
New York Central.....	1,111	998,299	85,232	1,083,531	136,707	61,189	470,897	80.7	234,377	155,399	121,278
New York, Chicago & St. Louis.....	1,111	3,984,255	409,174	4,393,429	509,724	261,988	1,888,173	77.3	1,121,133	801,641	677,774
Nevada Northern.....	165	54,618	684	55,302	8,139	1,221	10,760	49.2	30,562	19,066	20,793
New York Central.....	165	195,060	2,794	197,854	29,439	4,924	42,847	52.8	101,999	60,666	69,197
Pittsburgh & Lake Erie.....	11,043	16,225,425	4,535,800	20,761,225	2,755,887	5,377,348	9,745,814	82.4	4,187,407	1,271,476	14,705
Pittsburgh & Lake Erie.....	11,043	73,552,577	18,713,034	92,265,611	10,688,261	2,189,490	41,652,326	79.5	21,286,217	9,445,475	4,545,427
Pittsburgh & Lake Erie.....	233	805,840	36,829	842,669	128,809	25,670	406,384	123.9	210,097	297,731	119,392
Pittsburgh & Lake Erie.....	233	4,455,992	162,635	4,618,627	515,675	1,989,670	1,846,624	99.5	24,764	473,658	300,346
New York, Chicago & St. Louis.....	1,704	2,822,273	61,653	2,883,926	342,847	498,817	1,153,898	74.5	765,187	565,303	301,728
New York, Chicago & St. Louis.....	1,704	12,999,720	245,437	13,245,157	1,350,815	2,026,415	4,854,554	70.9	3,275,163	2,964,900	1,866,460
New York, New Haven & Hartford.....	1,881	3,939,345	2,117,816	6,057,161	939,944	1,127,248	2,572,558	75.4	1,656,313	1,141,313	513,754
New York, New Haven & Hartford.....	1,882	14,830,252	8,438,414	23,268,666	2,962,383	4,403,351	10,232,515	74.6	6,611,771	4,551,771	2,098,782
New York Connecting.....	21	172,451	.....	172,451	19,278	10,562	33,500	35.3	118,863	78,567	80,535
New York, Ontario & Western.....	21	877,858	.....	877,858	60,070	41,362	127,424	25.6	682,519	516,461	526,045
New York, Ontario & Western.....	576	537,966	5,731	543,697	48,780	116,863	266,229	81.2	110,004	57,255	23,681
New York, Ontario & Western.....	576	2,103,295	21,493	2,124,788	195,002	472,085	1,116,109	84.2	364,331	150,903	13,559
Norfolk & Western.....	2,191	3,885,041	152,317	4,037,358	685,230	1,286,896	1,320,669	84.9	644,761	50,617	280,182
Norfolk & Western.....	2,191	23,499,720	560,911	24,060,631	2,737,560	5,684,843	6,353,020	64.5	8,839,968	5,402,853	6,167,752
Norfolk Southern.....	805	364,063	3,484	367,547	73,745	51,286	137,434	79.3	79,184	46,478	25,998
Norfolk Southern.....	805	1,290,889	11,110	1,301,999	283,033	215,213	533,345	88.1	162,088	33,986	23,066
Northern Pacific.....	6,721	4,018,812	248,588	4,267,400	811,092	1,088,465	1,772,048	88.1	554,893	3,158	270,949
Northwestern Pacific.....	6,721	14,580,517	1,008,799	15,589,316	2,320,059	4,243,416	7,330,158	91.1	1,535,825	659,477	436,835
Northwestern Pacific.....	352	173,407	54,424	227,831	52,587	48,121	148,075	103.0	7,700	24,837	34,025
Northwestern Pacific.....	352	616,663	193,655	810,318	221,243	189,698	575,719	114.9	135,526	205,669	239,410
Oklahoma City-Ada-Atoka.....	132	36,431	290	36,721	5,491	1,480	8,582	46.3	20,860	18,134	18,818
Pennsylvania.....	132	115,607	1,050	116,657	23,785	4,895	41,677	65.1	43,458	32,027	20,419
Pennsylvania.....	10,289	20,699,930	5,734,732	26,434,662	3,344,303	5,279,006	11,198,448	73.8	7,714,517	4,355,364	3,714,452
Pennsylvania.....	10,289	91,551,790	22,244,238	113,796,028	13,244,008	25,488,159	47,281,977	74.8	31,562,462	19,570,145	17,443,166
Long Island.....	383	614,666	1,244,025	1,858,691	236,173	373,524	961,822	82.8	336,270	55,771	123,414
Pennsylvania-Reading Seashore Lines.....	383	2,258,392	4,670,685	6,929,077	884,136	1,447,728	3,805,325	86.7	971,834	95,279	476,558
Pennsylvania-Reading Seashore Lines.....	412	254,363	113,759	368,122	76,510	7,143	300,955	123.6	91,312	173,513	238,443
Pennsylvania-Reading Seashore Lines.....	412	953,293	391,765	1,345,058	297,672	302,682	1,064,299	123.8	337,202	642,961	886,018
Pere Marquette.....	2,115	1,937,026	61,648	1,998,674	306,375	525,456	891,290	89.2	228,430	74,885	31,282
Pittsburgh & Shawmut.....	2,115	8,560,637	275,900	8,836,537	1,198,826	2,051,650	3,702,299	81.7	1,701,464	1,086,837	679,388
Pittsburgh & Shawmut.....	101	14,699	.....	14,699	6,306	9,273	8,401	194.7	14,246	15,647	6,005
Pittsburgh & Shawmut.....	101	184,176	.....	184,176	25,246	69,418	63,453	96.4	6,653	791	7,577
Pittsburgh & West Virginia.....	136	176,921	.....	176,921	35,090	48,364	53,870	89.5	20,349	1,913	6,191
Pittsburgh & West Virginia.....	136	923,216	84	923,300	125,021	212,009	242,093	74.0	257,075	165,078	194,770
Pittsburgh & West Virginia.....	190	43,738	.....	43,738	9,585	3,782	10,102	108.5	3,782	7,498	4,639
Pittsburgh & West Virginia.....	190	305,061	.....	305,061	41,471	46,994	105,831	72.2	85,698	66,545	37,044
Reading.....	1,450	3,734,293	259,512	3,993,805	356,638	839,558	1,759,321	75.7	1,017,271	679,255	653,622
Reading.....	1,450	15,622,024	1,099,546	16,721,570	1,330,549	3,404,360	7,209,876	73.2	4,693,199	3,367,019	3,212,880
Richmond, Fredericksburg & Potomac.....	118	439,476	240,833	680,309	86,753	147,392	302,639	74.1	209,933	145,891	73,130
Richmond, Fredericksburg & Potomac.....	118	1,586,111	1,106,744	2,692,855	253,004	563,356	1,235,751	72.3	879,063	630,296	339,942
Rutland.....	407	188,313	26,218	214,531	34,745	57,981	151,037	95.8	11,416	3,047	5,179
Rutland.....	407	728,972	111,551	840,523	136,979	226,260	603,373	99.7	3,208	77,000	81,896

Continued on next left-hand page

HSGI

Economies



In the Roundhouse

WEARING parts made of HUNT-SPILLER *Air Furnace* GUN IRON rarely need attention in the roundhouse.

And why should they? In the majority of applications several Class III shoppings are required before renewals are necessary.

In addition, the service life of many adjacent components is greatly prolonged by the resistance of H S G I Crosshead Shoes, Outer Rod Bushings, Hub Liners and Pedestal Shoes and Wedges.

The superior service of H S G I parts in valves and cylinders is helping many railroads to reduce roundhouse work items and running repair costs. Why not yours?

HSGI

Reg. U.S. Trade Mark

Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings

Finished Parts

Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
Valve Rings All Shapes
Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

HUNT-SPILLER MFG. CORPORATION

V.W. Ellet Pres. & Gen. Mgr. / E.J. Fuller Vice-President

Office & Works

383 Dorchester Ave.

South Boston, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.

Export Agent for Latin America:

International Rwy. Supply Co., 30 Church Street, New York, N. Y.

HUNT-SPILLER

GUN IRON

Air Furnace

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF APRIL AND FOUR MONTHS OF CALENDAR YEAR 1939—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues				Operating expenses			Operating ratio	Net railway operation	Net railway operating income	
		Freight	Passenger	Total	(inc. misc.)	Way and structures	Equip-ment	Traffic			1939	1938
St. Louis-San Francisco.....April	4,843	\$2,785,399	\$256,631	\$3,042,030	\$559,036	\$834,858	\$1,380,260	\$116,673	91.2	\$296,934	\$18,780	\$38,683
St. Louis-San Francisco & Texas.....4 mos.	4,843	11,233,598	985,620	12,219,218	2,228,687	3,394,746	5,470,679	467,392	91.1	1,196,261	72,058	67,478
St. Louis, San Francisco & Texas.....April	267	121,413	512	121,925	13,156	24,135	36,269	7,950	84.5	19,660	12,733	8,736
St. Louis, San Francisco & Texas.....4 mos.	267	433,898	1,864	435,762	94,915	155,911	259,927	32,208	91.4	39,470	7,488	112,634
St. Louis Southwestern Lines.....April	1,700	1,525,105	22,601	1,547,706	233,558	282,633	495,677	83,636	72.7	438,294	183,407	42,048
St. Louis Southwestern Lines.....4 mos.	1,701	5,910,410	85,700	5,996,110	858,095	1,180,953	2,079,053	332,730	76.2	1,487,670	1,053,680	488,869
Seaboard Air Line.....April	4,317	2,951,832	886,790	3,838,622	535,993	694,719	1,470,679	165,055	78.5	844,812	347,174	341,691
Seaboard Air Line.....4 mos.	4,317	11,603,413	2,897,758	14,501,171	2,054,471	2,985,335	5,859,567	708,438	78.0	3,534,940	2,169,940	1,080,249
Southern Railway.....April	6,574	6,154,277	726,336	6,880,613	948,462	1,319,285	2,691,394	140,452	71.3	2,175,691	1,536,472	819,808
Southern Railway.....4 mos.	6,589	25,346,591	2,673,684	28,020,275	3,883,641	5,249,262	11,026,156	610,829	71.7	8,698,839	6,159,079	2,164,649
Alabama Great Southern.....April	315	2,061,710	157,071	2,218,781	80,214	118,795	184,597	49,510	68.4	194,928	133,624	87,892
Alabama Great Southern.....4 mos.	315	8,061,710	632,797	8,694,507	329,572	494,708	747,301	171,045	71.8	671,752	416,213	278,363
Cincinnati, New Orleans & Texas Pacific.....April	337	1,257,196	79,417	1,336,613	181,219	264,910	378,837	29,636	63.8	515,499	371,850	274,851
Cincinnati, New Orleans & Texas Pacific.....4 mos.	337	5,009,836	433,544	5,443,380	738,128	1,076,481	1,511,099	111,314	62.9	2,147,862	1,580,345	1,009,479
Georgia Southern & Florida.....April	398	1,340,881	39,804	1,380,685	10,848	28,603	83,971	1,452	79.2	40,117	23,953	4,141
Georgia Southern & Florida.....4 mos.	398	5,577,793	233,934	5,811,727	127,493	139,523	352,694	6,367	76.9	198,901	133,462	9,111
New Orleans & Northeastern.....April	204	213,845	13,280	227,125	31,380	36,035	4,906	72,100	63.2	90,882	60,463	34,048
New Orleans & Northeastern.....4 mos.	204	820,269	56,184	876,453	126,252	144,377	21,483	21,843	66.2	321,516	197,912	36,988
Northern Alabama.....April	100	45,482	911	46,393	12,525	1,196	1,030	15,721	66.9	15,958	10,162	2,114
Northern Alabama.....4 mos.	100	206,652	3,612	210,264	46,858	5,139	3,795	67,277	60.0	86,981	63,898	30,151
Southern Pacific.....April	8,657	9,600,496	1,552,553	11,153,049	1,264,679	2,285,723	384,398	4,724,525	76.8	2,853,909	1,682,053	991,845
Southern Pacific.....4 mos.	8,657	36,998,600	5,989,117	42,987,717	5,171,624	9,239,411	1,378,843	18,460,651	78.9	9,962,170	5,274,381	2,857,153
Southern Pacific Steamship Lines.....April	....	543,937	29,178	573,115	13,258	105,108	22,529	375,600	88.0	57,570	57,343	2,814
Southern Pacific Steamship Lines.....4 mos.	....	2,121,681	105,014	2,226,695	55,078	419,994	73,160	1,552,333	92.3	179,775	118,236	117,470
Texas & New Orleans.....April	4,416	2,909,674	269,526	3,179,200	540,613	618,955	1,190,522	133,345	77.3	788,821	496,398	283,248
Texas & New Orleans.....4 mos.	4,416	11,809,510	1,002,538	12,812,048	2,080,104	2,322,942	4,813,571	503,388	75.7	3,394,142	2,200,592	1,304,599
Spokane, Portland & Seattle.....April	948	1,737,802	184,396	1,922,198	673,373	149,040	98,555	236,552	77.4	590,707	441,490	314,355
Spokane, Portland & Seattle.....4 mos.	948	7,078,871	706,449	7,785,320	2,122,086	348,460	384,922	960,068	75.5	2,398,895	1,790,782	1,131,887
Tennessee Central.....April	286	168,689	4,399	173,088	184,931	29,579	5,919	66,890	79.0	38,912	26,968	10,984
Tennessee Central.....4 mos.	286	705,720	15,973	721,693	768,299	121,866	25,133	281,478	78.3	166,335	118,210	50,782
Texas & Pacific.....April	1,936	1,737,802	184,396	1,922,198	673,373	149,040	98,555	236,552	77.4	590,707	441,490	314,355
Texas & Pacific.....4 mos.	1,936	7,078,871	706,449	7,785,320	2,122,086	348,460	384,922	960,068	75.5	2,398,895	1,790,782	1,131,887
Texas Mexican.....April	162	110,528	333	110,861	124,742	14,764	11,636	2,941	59.9	50,067	43,876	38,749
Texas Mexican.....4 mos.	162	296,777	1,997	298,774	344,669	45,073	47,233	11,968	75.2	85,598	61,787	37,218
Toledo, Peoria & Western.....April	239	172,120	....	172,120	174,867	45,139	12,960	15,878	72.8	47,603	33,900	10,717
Toledo, Peoria & Western.....4 mos.	239	655,590	....	655,590	665,032	138,746	56,244	64,228	69.5	202,718	137,604	84,502
Union Pacific System.....April	9,903	9,638,622	1,256,915	10,895,537	1,221,202	2,425,839	472,598	4,315,058	76.5	2,823,697	1,504,349	707,011
Union Pacific System.....4 mos.	9,903	37,474,584	4,640,175	42,114,759	4,083,128	9,599,977	1,599,627	17,132,466	76.2	10,983,056	5,827,354	2,655,285
Utah.....April	111	52,224	....	52,224	52,395	9,358	19,786	372	88.4	6,069	1,651	1,160
Utah.....4 mos.	111	284,757	....	284,757	285,778	37,642	96,820	1,653	80.4	56,021	14,173	38,039
Virginian.....April	638	539,296	2,636	541,932	573,184	269,897	21,774	155,595	104.6	26,095	151,095	486,651
Virginian.....4 mos.	638	2,045,114	10,598	2,055,712	2,213,377	1,387,480	92,857	979,379	51.4	3,018,895	2,098,895	2,237,443
Wabash.....April	2,410	2,900,402	184,476	3,084,878	3,343,134	624,958	146,067	1,372,639	83.0	568,404	352,118	60,576
Wabash.....4 mos.	2,410	12,113,220	738,339	12,851,559	1,668,734	2,498,109	585,180	5,716,492	80.1	2,751,017	1,880,856	409,607
Ann Arbor.....April	294	253,977	2,161	256,138	27,386	68,013	12,982	153,563	103.4	9,105	30,981	47,886
Ann Arbor.....4 mos.	294	1,182,842	8,969	1,191,811	113,808	271,587	51,962	594,488	88.3	143,245	60,819	1,819
Western Maryland.....April	878	862,411	5,923	868,334	126,491	229,177	38,195	280,680	81.3	165,404	100,924	217,197
Western Maryland.....4 mos.	878	4,252,204	22,826	4,275,030	563,048	1,157,961	157,959	1,374,853	70.2	1,459,530	1,169,530	993,568
Western Pacific.....April	1,208	1,153,660	32,972	1,186,632	248,046	241,689	58,882	481,256	89.8	123,777	38,395	25,606
Western Pacific.....4 mos.	1,208	4,174,482	99,077	4,273,559	700,644	977,135	229,644	1,849,487	91.0	390,838	63,586	1,549,616
Wheeling & Lake Erie.....April	508	685,642	3	685,645	94,693	200,264	34,303	294,010	70.5	63,946	44,176	83,504
Wheeling & Lake Erie.....4 mos.	508	3,637,569	3	3,637,572	440,670	901,403	141,301	1,324,404	73.2	1,073,189	595,137	289,069